



Veterinary Pharmaceuticals

DIPLOMA COURSE SPECIFICATION

A. BASIC INFORMATION

University:	Sadat City
Faculty:	Veterinary Medicine
Program on which the course is given:	Diploma of Veterinary Pharmacology and Pharmaceuticals
Department offering the Course:	Pharmacology
Course code:	930
Course title:	Veterinary Pharmaceuticals
Lecture (hr/week):	2
Practical (hr/week):	2
Course coordinator:	Dr. Mohamed El-Hewaity

B. PROFESSIONAL INFORMATION

1- Overall aim of course
The aim of this course is to provide the diploma students with up- to- date basic information and knowledge about most veterinary products and drugs available including their sources , forms, brand and generic names , therapeutic indications, dosage , administration, precautions , withdrawal times in food animals , food animal residue and adverse reactions , beside drug regulation policy and guidelines. Moreover, prescription writing methods and prescribing information on veterinary products, beside compounding and dispensing of different veterinary pharmaceutical preparations will be covered.
2- Intended learning outcomes of course (ILOs)
<u>a-Knowledge and understanding</u>
By the end of this course the graduate should be able to:
<ul style="list-style-type: none">a.1. Explain the Drugs affecting the different body systems and organs beside autacoids and anti-inflammatory drugs.a.2. Discuss the chemotherapeutic agents.a.3. Categorize the different sources, forms and preparations of drugs.a.4. Recognize the components, forms, abbreviations and simples of prescription writing.a.5. Discuss the prescription of patent, official preparations and narcotic drugs.a.6. Explain the cautions and remarks in prescription writing.a.7. Define the metrology and psology and conversion between them.a.8. List the materials used in prescription and house hold measures.a.9. Explain the incompatibility in prescription writing and its types.a.10. Describe the utensils, instruments, procedures and instructions used for compounding and dispensing of drugs.a.11. Be aware with the pharmaceutical processes in preparing prescriptions.a.12. Recognize the compounding and dispensing of different veterinary pharmaceutical preparations.
<u>b-Intellectual skills</u>
By the end of this course the graduate should be able to :-
<ul style="list-style-type: none">b.1. Analyze ,summarize and evaluate information about drugs in professional manner.b.2. Investigate the basic lines for treatment and the use of drugs in farm animals and poultry.b.3. Establish a good link between drugs and their economy use in the veterinary field.b.4. Write assay for some drugs and prescribe them for patient animals.b.5. Interpret the interaction between drugs.b.6. Evaluate, interpret data in the field Veterinary Pharmaceuticals.
<u>c-Professional and practical skills</u>
By the end of this course the graduate should be able to:
<ul style="list-style-type: none">c.1. Employ recent methods for pharmaceutical preparations essential for the field.c.2. Prepare some drugs for veterinary use.c.3. Know and differentiate between different drug formulations.c.4. Write and read the prescription and recognize on its components and abbreviations .c.5. Use appropriate basic laboratory equipments safely and efficiently.

d-General and transferable skill

By the end of studying the course, the student should be able to

d.1. Utilize library, computer and other resources to acquire, apply scientific knowledge in reports or presentations.

d.2. Show ability to work in a team and effective communication with the laboratory staff.

d.3. Identify and work to collective goals and responsibilities.

3- Topics and contents

Topic	No. of hours		
	Lectures	Practical	Total
Drugs affecting digestive, respiratory and cardiovascular systems.	14		14
Drugs affecting urinary and reproductive systems.	12		12
Drugs affecting eye and skin.	10		10
Autacoids and anti-inflammatory drugs.	12		12
Antimicrobial agents. Sulphonamides, quinolones and nitrofurans. Antibiotics. Antiviral agents. Antifungal agents.	14		14
Anthelmintics. Anthelmintics for nematodes. Anthelmintics for tape worms. Anthelmintics for flukes.	14		14
Antiprotozoal agents Anticoccidial drugs Drugs for babesia, anaplasma, theileria and trypanosome	12		12
Drug Sources, forms and preparations.	-	6	6
Prescription writing and Forms of prescription.	-	6	6
Abbreviations & symbols in prescription writing.	-	2	2
Prescription for patent & official preparations and narcotic drugs.	-	6	6
Cautions & remarks in prescription writing and materials used in prescription.	-	6	6
Metrology and psology.	-	4	4
Latin & English numbers and House hold measures.	-	6	6
Preparation of certain quantites of a known strength solution and dilution of stock solution.	-	4	4
Incompatibility in prescription writing.	-	6	6
Compounding & dispensing of drugs.	-	6	6
Instructions, Utensils and Instuments used for drug compounding.	-	6	6
Pharmaceutical processes used in preparing prescription and other procedures in compounding drugs.	-	6	6
Dispensing simple solutions and lotions.	-	2	2
Dispensing mixtures and emulsions.	-	2	2

Dispensing linaments and ointments.	-	2	2
Dispensing electuaries and boluses.	-	2	2
Dispensing powders and pills.	-	2	2
Dispensing pessaries and suppositories.	-	2	2
Prescriptions for veterinary use.	-	4	4
Drug samples.	-	4	4
Total	88	88	176

4- Teaching and learning methods

- 4.1. Lectures.
4.2. Practical.
4.3. Self-learning activities.

5-Student assessment

5.1. Assessments methods

1- Written examination	For assessment of knowledge, back calling and Intellectual skills
2- Practical examination	For assessment of practical and professional skill.
3- Oral examination	For assessment of knowledge and Intellectual skills
4- Student activities	For assessment of knowledge and general and transferable skills

Method	5.B. Matrix alignment of the measured ILOs/ Assessments methods			
	K&U (a)	I.S (b)	P&P.S (c)	G.S (d)
Written exam	1,2,3,4,5,6,7, 8,9, 10,11,12	2,3,5,6		
Practical exam		1, 4	1,2,3,4,5	
Oral exam	1,2,3,5,7,8,9	2,3,4,6		
assignments	1,2,3,4,5	2,3,5		1-3

5.c. Weight of Assessments:

Assessment	Allocated Mark	Evidence
Final written exam	50%	Marked and signed written paper
Practical exam	20%	Marked and signed practical exam paper
Oral exam	20%	Signed list of oral exam marks
Student assignments	10%	Representative samples of presented materials

6- List of references

6.1. Departmental Notes

- J **A note on Veterinary pharmacology, Part 1** by, Prof. Dr.Taha Abd El Fatah Attia.
- J **A note on Practical pharmacology. Part 1(experimental pharmacology)** by, Prof. Dr Taha Abd El Fatah Attia.
- J **A note on Veterinary pharmacology ,Part 2** by Prof. Dr Abd El Fatah Attia.
- J **A note on Practical pharmacology. Part 2(Dispensing & therapeutics)** by, Prof. Dr Taha Abd El Fatah Attia.

6.2. Essential books

- J **Kim k. Holt (1999):** Veterinary Pharmaceuticals and Biologicals , 11 Edition
- J **Joel G. Hardman, Lee E. Limbird and Alfred G. Gilman (2001):** Goodman & Gilman's: The Pharmacological Basis of Therapeutics, 10th Edition.
- J **H. Richard Adams (1995) :** Veterinary Pharmacology and Therapeutics, 7th Edition.
- J **Merck , S. and Dohme , C. (2005) :** The Merck Veterinary Manual, 9th Edition.**Heinz Lüllmann, M. D.,Klaus Mohr, M. D.,Albrecht Ziegler, Ph.D.,Detlef and Bieger, M. D. (2005) :** Color Atlas of Pharmacology , 3rd edition .
- J **Carl Binz (2008):** Lectures on pharmacology for practitioners and students ,Volume: v.2.
- J **P. Venkatesan and M. J. Wood (1998):** General principles of antimicrobial therapy , pp. 63-78.

6.4. Journals , Websitesetc

Journals:

- J Journal of pharmacology and experimental therapeutics.
- J British Journal of pharmacology.
- J European Journal of Pharmacology.

Web sites:

- J <http://www.vetmed.wsu.edu/depts.-vcpl/>
- J <http://www.cc.nih.gov/>
- J <http://www.acvcp.org/>
- J <http://www.clinicalpharmacology.com/>
- J <http://www.vetnet.net/>
- J <http://www.summitpk.com/pksolutions.htm>
- J <http://www.analyticon.co.uk/pkpdpage.htm>

Course coordinator:

Dr. Mohamed El-Hewaity

Head of department:

Prof. Dr. Shabaan Gad Allah

Matrix alignment of course topics and ILOs

Topic	No. of hours /week		Total hours	Hours for lect.	Hours for pract.	ILOs			
	Lect.	Pract.				K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
Drugs affecting digestive , respiratory and cardiovascular systems.	2	-	14	14	-	1	1,2,3,4,5		1,3
Drugs affecting urinary and reproductive systems .	2	-	12	12	-	1	1,2,3,4,5		1,3
Drugs affecting eye and skin.	2	-	10	10	-	1	1,2,3,4,5		1,3
Autacoids and anti inflammatory drugs.	2	-	12	12	-	1	1,2,3,4,5		1,3
Antimicrobial agents. Sulphonamides , quinolones and nitrofurans. Antibiotics. Antiviral agents. Antifungal agents.	2	-	14	14	-	2	1,2,3,4,5		1,3
Anthelmintics. Anthelmintics for nematodes. Anthelmintics for tape worms. Anthelmintics for flukes.	2	-	14	14	-	2	1,2,3,4,5		1,3
Antiprotozoal agents Anticoccidial drugs Drugs for babesia, anaplasma,theileria and trypanosome	2	-	12	12	-	2	1,2,3,4,5		1,3
Drug Sources , forms and preparations.	-	2	6	-	6	3	6	3	2
Prescription writing and Forms of prescription .	-	2	6	-	6	4	6	4	2
Abbreviations & sympols in prescription writing.	-	2	2	-	2	4	6	4	2
Prescription for patent & official preparations and narcotic	-	2	6	-	6	5	6	4	2

drugs.									
Cautions & remarks in prescription writing and materials used in prescription.	-	2	6	-	6	6	6	4	2
Metrology and psology.	-	2	4	-	4	7	6	4	2
Latin & English numbers and House hold measures.	-	2	6	-	6	8	6	4	2
Preparation of certain quantites of a known strength solution and dilution of stock solution.	-	2	4	-	4	12	6	1,2,5	2
Incompitability in prescription writing.	-	2	6	-	6	9	6	4	2
Compounding & dispensing of drugs.	-	2	6	-	6	10	6	1,2,5	2
Instructions, Utensils and Instuments used for drug compounding.	-	2	6	-	6	10	6	5	2
Pharmaceutical processes used in preparing prescription and other procedures in compounding drugs.	-	2	6	-	6	11	6	1	2
Dispensing simple solutions and lotions.	-	2	2	-	2	12	6	1,2,5	2
Dispensing mixtures and emulsions.	-	2	2	-	2	12	6	1,2,5	2
Dispensing linaments and ointments.	-	2	2	-	2	12	6	1,2,5	2
Dispensing electuaries and boluses.	-	2	2	-	2	12	6	1,2,5	2
Dispensing powders and pills.	-	2	2	-	2	12	6	1,2,5	2
Dispensing pessaries and suppositories.	-	2	2	-	2	12	6	1,2,5	2
Prescriptions for veterinary use.	-	2	4	-	4	12	6		2
Drug samples.	-	2	4	-	4	-	-	3	-
Total			176	88	88				