



**Harper Adams
University**

Cohort 10 - September 2020

PgC/PgD/ MSc Veterinary Pharmacy Course Information

The Veterinary Pharmacy courses at Harper Adams University are run in conjunction with the Veterinary Pharmacy Education Programme (VPEP) which is endorsed by the Royal Pharmaceutical Society (RPS).

The following information details course content, course structure, assessment strategy and fee structure for the post graduate courses; Post Graduate Certificate, Post Graduate Diploma and MSc Veterinary Pharmacy.

For entry requirements please contact the course manager direct Dr Stephen Mansbridge smansbridge@harper-adams.ac.uk / 01952 815319 (direct dial)

Course Structure PgC Veterinary Pharmacy

POSTGRADUATE CERTIFICATE VETERINARY PHARMACY	
Module (Level 7)	Credit Value
Animals and Public Health (Module 1)	15
Veterinary Medicinal Products (Module 4)	15
Veterinary Pharmacy Practice (Module 6)	30

Course Structure PgD/MSc Veterinary Pharmacy

POSTGRADUATE DIPLOMA VETERINARY PHARMACY	MASTERS VETERINARY PHARMACY
Animals and Public Health 15 credits (Module 1)	
Companion Animal Health Care 15 Credits (Module 2)	
Equine Health Care 15 credits (Module 3)	
Veterinary Medicinal Products 15 credits (Module 4)	
Farm Animal Health Care 30 credits (Module 5)	
Veterinary Pharmacy Practice 30 credits (Module 6)	
	Research Project 60 credits (Module 7)

Teaching and learning methods used to deliver this curriculum are designed to provide experience, and, through reflection upon it, develop concepts which can then be explored through testing and experimentation.

A blended learning approach is provided with access to formal lectures, practical sessions, demonstrations, visits and workshops led by in- house academics, external speakers and practitioners.

All students will have the opportunity to make use of the Harper Adams Virtual Learning Environment (the learning hub); which is of considerable importance should student not be able to attend aspects of residential sessions at Harper Adams.

Module Information

Module 1 - Animals & Public Health

Learning Outcomes:

- 1) Evaluate measures that can be taken to minimise the chances of direct and indirect zoonotic infection.
- 2) Analyse the potential dangers of, and risks from, consuming food of animal origin and implement hazard analyses and prevention strategies to minimise such risk.
- 3) Explore the role of other stakeholders in optimising animal and human health.
- 4) Recognise opportunities to intervene proactively in the pharmacy/ SQP environment to ensure animal owners are aware of responsibilities both to their animal and to the public at large.
- 5) Evaluate the contribution made by companion animals to the individual and to society.

Examples of topics covered:

- Important issues that will assist the pharmacist in understanding the degree of care and understanding likely to be shown by a client.
- The public health aspects of both pet keeping and contact with animals in general.
- Classification of zoonoses and common examples. Risks associated with food-borne zoonoses for example those associated with meat; including *E. coli*, Salmonella and Clostridium.
- Variant Creutzfeldt-Jakob Disease (vCJD) and Bovine Spongiform Encephalopathy (BSE).
- Prevention strategies and recommended food hygiene measures.
- The work of the Food Standards Agency.
- Other disadvantages of keeping pets including injury, some possible links with diseases (of which allergies are likely to be most frequently seen in the pharmacy).

Module 2 - Companion Animal Health Care

Learning Outcomes:

- 1) Appraise the role of the pharmacist and SQP in companion animal health care, recognising conditions or scenarios that fall outwith competence or legal jurisdiction and refer appropriately.
- 2) Evaluate the importance of specific parasitic conditions in a range of companion animals and synthesise appropriate control and prevention strategies.
- 3) Analyse a range of potential health problems for a variety of companion animals and evaluate disease prevention strategies delivered in collaboration with other veterinary healthcare providers.
- 4) Formulate and critically analyse animal health plans for a range of companion animals.

Examples of topics covered:

- Companion Animal Endo and Ecto parasites.
- Common ecto- and endo- parasites and their life cycles.
- The prevention and control of ecto- and endo-parasitic infection; Anthelmintics & active ingredients.
- How to recognise general signs and symptoms of disease, including diseases due to micro-organisms and endocrine diseases so appropriate veterinary referral can be facilitated.
- Other general actions necessary to keep cats and dogs healthy; nutrition, exercise and grooming.
- Methods of administration of medicines.
- Effect of life-stage on medicinal product suitability.
- Travelling, The PETS travel scheme, Vaccination protocols.
- Role of Pharmacist in Companion Animal Healthcare
- A general awareness of small animal welfare problems resulting from poor owner practice of husbandry.
- Housing options for different species and knowledge of the options for managing them including available medicines.
- Small mammals (rabbits, guinea pigs, hamsters, rats and mice) and exotics, common diseases and their management.
- Birds (pigeons and cage birds) and ornamental fish, zoonotic risk, common conditions and medicines available.

Module 3 - Equine Health Care

Learning Outcomes:

- 1) Appraise the role of the pharmacist and SQP in equine health care; recognising conditions or scenarios that fall outwith competence or legal jurisdiction and refer appropriately.
- 2) Evaluate the importance of parasitic conditions affecting the equid, synthesise sustainable parasitic control protocols for a range of specific scenarios and husbandry situations.
- 3) Analyse the potential health problems of equines and evaluate disease prevention strategies in collaboration with other veterinary healthcare providers.
- 4) Evaluate factors associated with the maintenance and promotion of health in a range of equines.

Examples of topics covered:

- Ecto-parasites and endo-parasites of the horse, lifecycles, prevention and control.
- Advice for clients on procedures for worming horses, strategic worming techniques, methods of administration and the products available.
- Resistance to anthelmintics.
- Common equine diseases including microbial diseases
- The basic factors associated with equine health i.e. Dermatological conditions (including ecto-parasitic and zoonotic) as well as Gastrointestinal and metabolic disorders including colic, diarrhoea, laminitis.
- General healthcare and husbandry.
- Healthcare professionals; dentistry, farriery, physiotherapy and other remedial treatments.
- Vaccination programmes.
- Legislation; Horse passports and Veterinary medicines.

Module 4 - Farm Animal Health Care

Learning Outcomes:

- 1) Analyse the potential health problems for a range of food producing animals and evaluate appropriate control and prevention strategies.
- 2) Analyse a range of potential health problems for a variety of food producing animals and evaluate appropriate control and prevention strategies.
- 3) Formulate farm animal health plans for with specific reference to parasitic disease and the role of POM-V and POM-VPS vaccines
- 4) Advise on safe, effective and responsible use of veterinary medicines for food producing species.
- 5) Analyse the sustainability of current disease prevention strategies in food producing animals with respect to the impact on human and animal health and the environmental impact of the use of veterinary medicines.

Examples of topics covered:

- An appreciation of farming practices in the UK and problems faced by farmers.
- Farm Animal Health Plans – the importance and practical advice on how to assist in the preparation of a FHP (The implications for the prescription and supply of animal medicines, health and welfare of animals and human safety).

Cattle:

- Animal welfare problems resulting from poor husbandry and housing.
- Common ecto- and endo-parasites and their life cycles.
- The control of ecto- and endo-parasitic infection.
- Recognition of common clinical signs and symptoms of disease in cattle.
- General good husbandry practices.
- Nutritional diseases and control of diseases due to micro-organisms
- Dairy hygiene - The specific risks to human health associated with keeping cattle.

Sheep:

- Animal welfare problems resulting from poor husbandry and housing.
- Common ecto- and endo-parasites and their life cycles.
- The control of ecto- and endo-parasitic infection.
- Resistance to anthelmintics.
- Recognition of common clinical signs and symptoms of disease in sheep.
- General good husbandry practices.
- Recognition of nutritional conditions and diseases due to micro-organisms.
- The specific risks to human health associated with keeping sheep.

Pigs and Poultry:

- Animal welfare problems resulting from poor husbandry and housing.
- Common ecto-and endo-parasites and their life cycles.
- The control of ecto- and endo-parasitic infection.
- Recognition of common clinical signs and symptoms of disease in pigs and poultry.
- Recognition of nutritional conditions and diseases due to micro-organisms.
- The specific risks to human health associated with keeping pigs and poultry.

Bees:

- An overview of beekeeping and the problems faced by beekeepers.
- The use of measures to minimise infection.

Module 5 - Veterinary Medicinal Products

Learning Outcomes:

- 1) Critically evaluate the current Veterinary Medicines Regulations stated in the Veterinary Medicines Directorate Code of Practice with respect to the supply of veterinary medicinal products as a registered qualified person (RQP) and Suitably Qualified Person (SQP).
- 2) Analyse the properties and functions of veterinary medicinal products.
- 3) Analyse the opportunity for the appropriate use of a range of wound dressings.
- 4) Compare and contrast the major anatomical and physiological systems of the principal domestic species and evaluate the impact on medicine pharmacodynamics and pharmacokinetics.

Examples of topics covered:

- Veterinary Medicines Regulations: Legal regulations pertaining to the registration and supply of veterinary medicines.
- RQPs and SQPs.
- VMD code of practice.
- Dispensing veterinary prescriptions, records keeping and the cascade.
- General information on veterinary medicines, their composition and presentation and safety aspects associated with their use both for animal and the owner.
- Vaccines – types and methods of use; quality issues and formulation.
- Pharmacodynamics and pharmacokinetics, factors affecting efficacy.
- Factors affecting the choice of medicines, including route of administration.
- Development of resistance to antimicrobials and antibiotics.
- Complementary and Alternative medicines formulation and regulation.
- Reporting suspected adverse drug reactions (SARASS).
- The work of the VMD and the VPC.
- Structure and function of skeletal, digestive, respiratory, reproductive and cardiovascular systems. The integument, sensory organs, liver, kidney and body defence.
- Biochemistry of the wound healing process.
- First aid measures to help a companion animal that has sustained an injury.
- Choice of an appropriate product for the management of soft tissue wounds.

Note: This is not intended to circumvent veterinary diagnosis and treatment but will assist those pursuing further studies in the field of wound healing or with a special interest in wound healing.

Module 6 - Veterinary Pharmacy Practice

Learning Outcomes:

- 1) Integrate and apply previously acquired knowledge and skills to demonstrate an effective veterinary pharmacy service.
- 2) Evaluate current collaborations with other animal healthcare professionals to support optimum health and welfare in animals.
- 3) Research and analyse the environment for a business situation.
- 4) Develop marketing and financial plans for a sustainable business.

Examples of topics covered:

- Other animal healthcare professionals: behaviourist, equine dentist, groomer, nutritionist, physiotherapist (and other remedial practitioners), master saddlers, agricultural merchants and veterinary surgeons
- Exploring clients' ideas, concerns and expectations.
- Recognition of the hidden agenda.
- Communication with other Healthcare providers
- Health and Safety legislation and risk assessments.
- Legal Duty of Care, Negligence, COSHH, RIDDOR and Standard operating procedures.
- Veterinary Surgeons' Act 1966, and the proposed changes.
- The Animal Welfare Act 2006, including recognition and assessment of pain.
- Business skills including business planning and accounting.
- Professional attitude, appearance and customer care.
- Continuing professional development.
- Implications for service development, delivery, standards and marketing of classification of services.
- Market assessment.
- Product selections and familiarisation.
- Companion animal and commercial animals market.

Teaching Plan, starting September 2020 for Cohort 10

Residential Period 1: 10th – 13th September 2020

10th September: Induction & introduction to course

11th September: Taught sessions for module Animals & Public Health (A7061)

12th September: Taught sessions for module Companion Animal Health Care (A7062)

13th September: Taught sessions for module Equine Health Care (A7063)

Assessment: Launch of coursework & formative workbooks for Animals & Public Health and Equine Health Care and formative workbook for Companion Animal Health Care.

Residential Period 2: 6 & 7th March 2021

Additional teaching weekend for A7061, A7062 and A7063 and Skills Development

Residential Period 3: 3rd – 9th July 2021

3rd July Examinations for Companion Animal Health Care (A7061)

4th July Completion of poster presentations for Animals & Public Health (A7061)

5th–9th July Taught sessions for modules Veterinary Medicinal Products (A7064) & Farm Animal Health Care (A7065)

Assessment: Launch of coursework & formative workbooks for Veterinary Medicinal Products (A7064).

Launch of Veterinary Pharmacy Practice Module (A7066) and part 1 of associated coursework; Professional Case Studies.

October 2021: Launch of coursework for Farm Animal Health Care (A7065)

Residential Period 4: 4th – 6th February 2022

4th February Veterinary Pharmacy Practice

5th February Taught sessions for module Veterinary Pharmacy Practice: Marketing

6th February Taught sessions for module Veterinary Pharmacy Practice: Business Planning

Assessment: Launch of Veterinary Pharmacy Practice Module (A7066) coursework part 2: Business Planning

Residential Period 5: 2nd – 3rd July 2021

2nd & 3rd July - Exams

Launch of MSc dissertation

There is an optional residential for those studying the Major Research Project for the delivery of research methods.

Examinations: Veterinary Medicinal Products (A7064) & Farm Animal Health Care (A7065)

Submission of Veterinary Pharmacy Practice coursework 1 & 2

*****July 2023 submission of MSc dissertation *****

NB: Full schedule of assessment dates will be issued during the induction period.

Assessment Information

Module	Credits	Formative Workbook	Report	Presentation	Examination
			% contribution to module mark		
Animals & Public Health (A7061)	15	YES	80	20	N/A
Companion Animal Health Care (A7062)	15	YES	N/A	N/A	100
Equine Health Care (A7063)	15	YES	50	N/A	N/A
Veterinary Medicinal Products (A7064)	15	YES	50	N/A	50
Farm Animal Health Care (A7065)	30	YES	50	N/A	50
Veterinary Pharmacy Practice (A7066)	30	NO	X 2 50% each	N/A	N/A

PgC/PgD/ MSc Veterinary Pharmacy Course Fees Information (not including accommodation)

Postgraduate Certificate (Tuition Fees) UK & EU Students

Module	Credits	Payment Date	Fee Due
Animals & Public Health (A7061)	15	10 th September 2020	£700
Veterinary Medicinal Products (A7064)	15	3 rd July 2021	£700
Veterinary Pharmacy Practice (A7066)	30	4 th February 2022	£1400
Total Fees			£2800

Postgraduate Diploma & MSc (Tuition Fees) UK & EU Students

Module	Credits	Payment Date	Fee Due
Animals & Public Health (A7061)	15	10 th September 2020	£2112.50
Companion Animal Health Care (A7062)	15		
Equine Health Care (A7063)	15		
Veterinary Medicinal Products (A7064)	15	3 rd July 2021	£2112.50
Farm Animal Health Care (A7065)	30		
Veterinary Pharmacy Practice (A7066)	30	4 th February 2022	£1412.50
Total Fees			£5637.50
MSc	60	July 2022	£2512.50
			£8150

Postgraduate Certificate (Tuition Fees) International Students

Module	Credits	Payment Date	Fee Due
Animals & Public Health (A7061)	15	10 th September 2020	£1412.50
Veterinary Medicinal Products (A7064)	15	3 rd July 2021	£1412.50
Veterinary Pharmacy Practice (A7066)	30	4 th February 2022	£2825
Total Fees			£5650

Postgraduate Diploma (Tuition Fees) International Students

Module	Credits	Payment Date	Fee Due
Animals & Public Health (A70061)	15	10 th September 2020	£4218.75
Companion Animal Health Care (A7062)	15		
Equine Health Care (A7063)	15		
Veterinary Medicinal Products (A7064)	15	3 rd July 2021	£4218.75
Farm Animal Health Care (A7065)	30		
Veterinary Pharmacy Practice (A7066)	30	4 th February 2022	£2812.50
Total Fees			£11250
MSc	60	July 2022	£1650
			£12900

