### Medical Nursing, Inpatient Care and Hospital Management (Small Animal)

Total Number of Lectures/Practicals
- 2005/2006 = 11 hours Yr 1, Blocks 1 & 2
- 41 hours Yr 2, Blocks 1 & 2

Students should review Module 3 for anatomy and physiology of all structures.

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</table>
| 5.1 | Inpatient care | **Treatment of hospitalised medical patients, including critical care patients**
Introduction to basic fluid therapy. Assessment of hydration status from history, clinical exam and laboratory findings. Rate of infusion i.e. fluid therapy calculations. Routes of fluid administration, placement of an iv cannula and monitoring fluid therapy e.g. urine output, CVP etc. Psychological needs, monitoring, patient observations, SOAP, TPR, Temperature conversions, administration of medicines, pain assessment, care of recumbent patients and basic kennel and cattery accommodation. | Overview | 1 | This is taught in more detail elsewhere (5.45-5.49) |
| 5.2 | Inpatient care | **Practical class:**
**Treatment of hospitalised medical patients, including critical care patients**
Introduction to basic fluid therapy and assessment of hydration status. IV equipment to include: Crystalloids and colloids, fluid administration sets including standard, blood and paediatric/burette, extension sets, fluid pump, cannulae etc. Shown videos of cannula placement in the cephalic vein in a dog and the jugular vein in a horse. | Overview | 1 | |
| 5.3 | Inpatient care | | | | |
| 5.4 | Inpatient care | **Techniques for patient comfort, including physiotherapy**
| 5.4 | Inpatient care | **Alternative therapies for patient comfort**
Basic principles of homeopathy and acupuncture. | Overview | 1 | |
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<td>5.5</td>
<td>Inpatient care</td>
<td><strong>Practical class:</strong> Exercise as a form of physical therapy. Care of recumbent patients. Physiotherapy techniques. Use of therapeutic exercise. Use of heat, cold and massage. Prevention and management of decubital sores and urine scalding. Environmental enrichment.</td>
<td>Good</td>
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<td>5.6</td>
<td>Inpatient care</td>
<td><strong>Treatment of hospitalised medical patients, including critical care patients</strong> Monitoring procedures and equipment: subjective and objective assessments. Contents of kennel and cattery accommodation.</td>
<td>Good</td>
<td>1</td>
<td>Construction is taught in 5.10. Environmental aspects are taught in 5.11. Enteral feeding is taught in General Nursing, Yr 1</td>
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<tr>
<td>5.6</td>
<td>Inpatient care</td>
<td><strong>Use of urinary catheters</strong> Procedures for sterile catheterisation of male and female dogs and cats. Types of urinary catheters available. Maintenance of indwelling catheters. Monitoring urinary output.</td>
<td>Good</td>
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<td>5.6</td>
<td>Inpatient care</td>
<td><strong>Recording observations and treatment given</strong> Routine completion of hospital records. Observations of patient: general demeanour, signs of pain, TPR, food and water intake, urination, defaecation, vomiting, diarrhea. Medication administered. Laboratory tests and results.</td>
<td>Good</td>
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<td>5.6</td>
<td>Inpatient care</td>
<td><strong>Caring and responsible attitude to patients</strong></td>
<td>Overview</td>
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<td>5.7</td>
<td>Inpatient care</td>
<td><strong>Practical class:</strong> Monitoring procedures and equipment: subjective and objective assessments. Contents of kennel and cattery accommodation. Types of urinary catheters to include Foley bitch, Jackson cat and Cooks Slippery Sam®. Maintenance of indwelling urinary catheters. Monitoring urinary output. Equipment for observation of patient. Equipment for administering medication – pill popper, pill splitter.</td>
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| 5.8 | Inpatient care | Administration of medication  
Different forms in which medication are presented. Understanding the terms: systemic, local, parenteral. | Good | 1 | |
| 5.8 | Inpatient care | Routes of administration  
i/v, i/m, s/c, oral, subconjunctival, intradermal, intrarectal, epidural, intraperitoneal, intrathecal, inhalational and absorption across skin or mucous membrane. | Good | 1 | |
| 5.8 | Inpatient care | Reasons for choosing a particular route of administration | Good | 1 | |
| 5.8 | Inpatient care | Introduction to drugs in common use and calculation of dose rates  
Familiarity with different categories of drugs and regulations for dispensing/use in Ireland. Brief understanding of methods by which drugs may be categorised outside Ireland. Labelling of drugs dispensed. Abbreviations in common use. Basic calculations involving drug dose rates. | Overview | 1 | This is taught in further detail in Pharmacology, Yr 3 |
| 5.9 | Inpatient care | Routine and therapeutic bathing and coat care  
Indications for bathing. Different types of therapeutic shampoos available. Procedure and restraint of animal for complete immersion, including health and safety precautions. Protection of animal’s eyes, ears and skin while bathing and drying. | Good | 1 | |
| 5.9 | Inpatient care | Routine and therapeutic bathing and coat care  
Sponge baths. Basic grooming: benefits of grooming and equipment used. | Overview | 1 | |
| 5.10 | Inpatient care | Management and construction details of facilities for keeping companion animals as in-patients  
Basic checklist of facilities required and routine maintenance procedures for: treatment area, patient wards, isolation area, exercise area, kitchen, bathing and grooming area, necropsy area. Maintenance of an isolation unit. | Good | 1 | |
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<td>5.10</td>
<td>Inpatient care</td>
<td><strong>Management and construction details of facilities for keeping companion animals as in-patients</strong>&lt;br&gt;Factors to consider when choosing location for a veterinary premises. Ideal properties of materials used in construction of inpatient facilities.</td>
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<td>5.10</td>
<td>Inpatient care</td>
<td><strong>Security</strong>----------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<td>5.11</td>
<td>Inpatient care</td>
<td><strong>The hospital environment - cleaning</strong>&lt;br&gt;Importance of physical cleaning before chemical disinfection. Procedure for cleaning kennels (including isolation kennels), kitchen and exercise runs.</td>
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<td>5.11</td>
<td>Inpatient care</td>
<td><strong>The hospital environment - ventilation</strong>&lt;br&gt;Purpose of ventilation. Types of ventilation system; active and passive. Problems associated with inadequate ventilation or excessive/draughty ventilation.</td>
<td>Good</td>
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<td>5.11</td>
<td>Inpatient care</td>
<td><strong>The hospital environment - heating</strong>&lt;br&gt;Ideal temperature range for dogs, cats, very young/old animals. Types of heating systems.</td>
<td>Good</td>
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<td>5.11</td>
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<td><strong>The hospital environment - lighting</strong>&lt;br&gt;Problems associated with inadequate or excessive lighting</td>
<td>Good</td>
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<td>5.11</td>
<td>Inpatient care</td>
<td><strong>The hospital environment - bedding</strong>&lt;br&gt;Types of bedding available for small animals. Factors affecting choice of bedding material. Frequency of cleaning/changing bedding</td>
<td>Good</td>
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<td>5.11</td>
<td>Inpatient care</td>
<td><strong>The hospital environment - waste disposal</strong>&lt;br&gt;Disposal of soiled bedding and other hospital waste.</td>
<td>Overview</td>
<td>1</td>
<td>This is taught in Health &amp; Safety, Yr 1</td>
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| 5.12 | Diseases | **Inflammation**  
| 5.13 | Diseases | **Hypersensitivity**  
Definition of hypersensitivity. Classification of hypersensitivity into four main types: Type I, Type II, Type III, Type IV (delayed). Causes, processes, signs, diagnosis and treatment of each type of hypersensitivity. | Good | 2 | Relevant nutritional management is taught in 5.51-5.52 |
| 5.14 | Toxicology | **Poisons**  
Terms used in toxicology: toxin, poison, antidote. Use of Poison Information Services. Sources of toxic substances: medicines, pesticides, household, plants, reptile bites, insect stings. History taking and important questions in cases of suspect poisoning. General principles of therapy, including emesis, gastric lavage, adsorbents and cathartics. Possible sources, modes of action, clinical signs, diagnosis and treatment of common poisons: paraquat, strychnine, warfarin, ethylene glycol, organophosphate and carbamate, lead, alphachloralose, metaldehyde. | Good | 2 | |
| 5.14 | Toxicology | **Poisons**  
Possible sources, clinical signs, diagnosis and treatment of NSAIDs, paracetamol, phenol, petroleum products, carbon monoxide, chocolate. | Overview | 2 | |
| 5.14 | Toxicology | **Poisons**  
Dealing with oiled birds. Reptile bites and insect stings. | Overview | 2 | Reptile bites and insect stings are taught in First Aid, Yr 1 |
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<td>5.15</td>
<td>Parasitic disease</td>
<td><strong>Ecto/endo parasite infestation, including public health aspects</strong>&lt;br&gt;Definition of a parasite. Classification of parasites in the dog and cat. Naming of parasites according to genus and species. Important definitions and concepts: ectoparasite, endoparasite, microscopic and macroscopic parasite infestation, parasiticide, ectoparasiticide, anthelmintic, final host, intermediate host, transport host, paratenic host, direct life cycle indirect life cycle, host specific, non-host specific pre-patent period, patent period, hypobiosis temporary parasite, permanent parasite.</td>
<td>Good</td>
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<td>Large animal parasitology is taught in Large Animal Nursing, Yr 3</td>
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<td>5.16</td>
<td>Parasitic disease</td>
<td><strong>Endoparasites - Nematodes</strong>&lt;br&gt;Characteristics of nematodes. Identification, life cycle, clinical signs, laboratory diagnosis and public health aspects of the following: ascarids (<em>Toxocara canis, Toxocara cati, Toxascaris leonina</em>), hookworms (<em>Uncinaria stenocephala</em>), whipworms (<em>Trichuris vulpis</em>), lungworms (<em>Aelurostrongylus abstrusus</em>), worms of the right ventricle &amp; pulmonary artery (<em>Angiostrongylus vasorum</em>). Pathogenesis and treatment of disease caused by nematodes.</td>
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<td>5.17</td>
<td>Parasitic disease</td>
<td><strong>Endoparasites - Protozoa</strong>&lt;br&gt;Characteristics of protozoa. Identification, life cycle, clinical signs, laboratory diagnosis and public health aspects of the following: <em>Toxoplasma gondii</em>.</td>
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<td>5.17</td>
<td>Parasitic disease</td>
<td><strong>Endoparasites - Protozoa</strong>&lt;br&gt;<em>Isospora species, Sarcocystis species, Neospora caninum, Giardia lamblia</em>. Pathogenesis and treatment of disease caused by protozoa.</td>
<td>Overview</td>
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<td>5.20</td>
<td>Parasitic</td>
<td>Ectoparasites - Arachnids Identification, life cycle, clinical signs, laboratory diagnosis and public health aspects of the following: non-burrowing mites (<em>Cheyletiella yasguri</em>, <em>Cheyletiella blakei</em>, <em>Otodectes cynotis</em>, <em>Neotrombicula autumnalis</em>). Pathogenesis and treatment of disease caused by arachnids.</td>
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<td>5.21-5.23</td>
<td>Parasitic</td>
<td><strong>Practical class:</strong> Identification techniques and identification of common parasites of small animals Flotation qualitative technique. Identification of <em>Toxocara canis</em> and <em>cati</em>, <em>Toxascaris leonine</em>, <em>Uncinaria stenocephala</em>, <em>Trichuris vulpis</em>, <em>Angiostrongylus vasorum</em>, <em>Aelurostrongylus abstrusus</em>, <em>Dipylidium caninum</em>, <em>Echinococcus granulosus</em>, <em>Taenia sp.</em>, <em>Toxoplasma gondii</em>, <em>Isospora sp.</em>, <em>Giardia sp.</em>, <em>Ctenocephalides canis</em> and <em>felis</em>, <em>Pulex irritans</em>, <em>Linognathus setosus</em>, <em>Trichodectes canis</em>, <em>Felicola subrostratus</em>, <em>Blowfly larvae</em>, <em>Ixodes ricinus</em>, <em>Ixodes canisuga</em>, <em>Ixodes hexagonus</em>, <em>Sarcoptes scabiei</em>, <em>Notoedres cati</em>, <em>Demodex sp.</em>, <em>Cheyletiella sp.</em>, <em>Otodectes sp.</em>, <em>Neotrombicula autumnalis</em>.</td>
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| 5.24 | Medical disease | **Common diseases of the skin**  
Causes, signs, diagnostic tests and treatment of non-parasitic skin diseases: hormonally induced skin disease, alopecia, pyoderma, dermatophytosis (ringworm), atopy and allergic skin disease. Advising owners on methods to prevent self-mutilation by animals with skin conditions. Nursing care, medical management and monitoring of the patient with skin disease. | Good | 2 | Relevant nutritional management is taught in 5.51-5.52 |
| 5.24 | Medical disease | **Common diseases of the skin**  
Brief reminder of causes, signs and treatment of parasitic skin diseases: fleas, lice, mites, ticks and hookworms. | Overview | 2 | This is taught in detail in 5.16-5.20. |
| 5.25 | Medical disease | **Common diseases of the special senses**  
| 5.25 | Medical disease | **Common diseases of the special senses**  
| 5.25 | Medical disease | **Common diseases of the special senses**  
Approach to dealing with ocular emergencies: prolapse of the eyeball, ocular trauma, chemical irritation, glaucoma. Nursing care, medical management and monitoring of the patient with ocular disease. | Good | 2 | |
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| 5.26 | Medical disease                   | Common diseases of the special senses  
Organs of hearing and balance. Brief review of the structure and functions of the ear: hearing and balance. Causes, signs, and treatment of common conditions affecting the ear: external ear (otitis externa), middle ear (otitis media), inner ear (otitis interna), pinna (aural haematoma). Nursing care, medical management and monitoring of the patient with ear disease. | Good                       | 2          |       |
| 5.26 | Medical disease                   | Common diseases of the special senses  
Organs of taste and smell. Brief review of anatomy of organs of taste and smell. Nursing care, medical management and monitoring of the patient with nasal and gustationary disease.                                                                                                                  | Good                       | 2          |       |
| 5.26 | Medical disease                   | Drugs used in ophthalmic and aural disorders  
| 5.27 | Diseases                          | Categorisation of disease  
Physical, metabolic, infectious, allergic, degenerative, nutritional, congenital, poison/drug induced. DAMNIT scheme.                                                                                                                                                             | Overview                   | 2          |       |
| 5.27 | Diseases                          | Epidemiology  
Definitions: endemic, epidemic, epizootic. Application of epidemiological studies: to identify the cause/source of infection, to monitor the number of cases of a disease, to monitor the effectiveness of a control policy.                                                                                                           | Overview                   | 2          |       |
| 5.27 | Diseases                          | Pathogenesis of disease contagion/infection  
Understanding infectious, non- infectious and contagious disease. Definitions: carrier animals, direct contact, indirect contact, fomite, vector, biological, non-biological, transport host, paratenic host.                                                                                           | Overview                   | 2          |       |
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| 5.27 | Infectious diseases           | *Infectious diseases and prevention of spread of infection*  
Routes of transmission: routes by which organisms leave the animal, routes of transmission from one animal to another, routes of entry into a new host. Modes of transmission of different types of organism; viruses, bacteria, ectoparasites and endoparasites. Incubation of disease. | Good                        | 2           |                                                                                           |
| 5.28 | Infectious diseases           | *Canine infectious disease*  
Pathogenesis, signs, control and nursing care of canine infectious diseases: canine distemper, infectious canine hepatitis, canine leptospirosis, canine parvovirus, kennel cough complex | Good                        | 2           |                                                                                           |
| 5.29 | Infectious diseases           | *Feline infectious disease*  
Pathogenesis, signs, control and nursing care of feline infectious diseases: feline panleucopaenia, feline upper respiratory tract disease, feline leukaemia virus, feline immunodeficiency virus, feline infectious anaemia, feline infectious peritonitis, chlamydiosis. | Good                        | 2           |                                                                                           |
| 5.29 | Infectious diseases           | *Other infectious disease*  
Pathogenesis, signs, control and nursing care of: Rabies, Salmonellosis. Definitions: zoonosis, isolation, quarantine. Methods of disease control: controlling environmental contamination, breaking life cycles. | Good                        | 2           | Zoonosis and quarantine are taught in Heath & Safety, Yr 1. Maintenance of an isolation unit is taught in Medical Nursing, Yr 1 |
| 5.30 | Medical disease               | *Common diseases of the haematopoietic system*  
Production of components; erythrocytes, leucocytes, lymphocytes and platelets. | Overview                    | 2           | This is introduced in Anatomy & Physiology, Yr 1                                           |
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| 5.30 | Medical disease | **Common diseases of the haematopoietic system**  
Abnormalities detected by diagnostic tests; anaemia, erythrocytosis, leucocytosis, thrombocytopenia, leucocytosis and leukaemia. Causes, signs and treatment of anaemia. Hereditary, congenital and acquired clotting defects. Procedures used to diagnose clotting disorders: blood smear, platelet count, PT, APTT, clotting times, PIVKA, von Willebrand factor, buccal mucosal bleeding time. Nursing care, medical management and monitoring of the patient with haematopoietic disease. | Good                      | 2           |                                                        |
| 5.31 | Medical disease | **Common diseases of the liver**  
Causes and signs of hepatic disease (acute and chronic). Nursing care, medical management and monitoring of patients with hepatic disease. | Good                      | 2           | Relevant nutritional management is taught in 5.51-5.52                |
| 5.31 | Medical disease | **Common diseases of the pancreas**  
Causes and signs of pancreatic disease: acute and chronic pancreatitis, exocrine pancreatic insufficiency, endocrine pancreatic disease, insulinoma. Nursing care, medical management and monitoring of the patient with pancreatic disease. | Good                      | 2           | Relevant nutritional management is taught in 5.51-5.52                |
| 5.32 | Medical disease | **Common diseases of the urinary tract**  
Brief review of the structure and function of the urinary tract. | Overview                  | 2           | This is taught in detail in Anatomy & Physiology, Yr 1               |
| 5.32 | Medical disease | **Common diseases of the urinary tract**  
Define terms relating to renal disease: nephritis, glomerulonephritis, pyelonephritis, interstitial nephritis. Causes, signs and treatment of major renal conditions (acute and chronic). Diagnostic procedures; cystocentesis, urinary catheterisation. | Good                      | 2           | Urinary catheters are taught in 5.6 (Yr 1)                            |
| 5.33 | Medical disease | **Common diseases of the urinary tract**  
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<td>5.33</td>
<td>Medical disease</td>
<td><strong>Common diseases of the urinary tract</strong>&lt;br&gt;Nursing care, medical management and monitoring of the patient with urinary tract disease</td>
<td>Good</td>
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<td>Relevant nutritional management is taught in 5.51-5.52</td>
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<td>5.34</td>
<td>Medical disease</td>
<td><strong>Common diseases of the female genital system</strong>&lt;br&gt;Causes, signs and treatment of disorders of the female genital tract including: ovarian neoplasia, vaginal prolapse, hyperplasia, polyps and neoplasia, cystic endometrial hyperplasia and pyometra, mastitis, mammary hyperplasia and neoplasia, pseudopregnancy. Nursing care, medical management and monitoring of the female patient with reproductive disease.</td>
<td>Good</td>
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<td>Students should review Reproduction, Yr 1</td>
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<td>5.35</td>
<td>Medical disease</td>
<td><strong>Common diseases of the male genital system</strong>&lt;br&gt;Causes, signs and treatment of disorders of the male genital system including: testicular neoplasia, benign prostatic hyperplasia, prostatic neoplasia, bacterial prostatitis. Nursing care, medical management and monitoring of the male patient with reproductive disease.</td>
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<td>5.36</td>
<td>Medical disease</td>
<td><strong>Common diseases of the nervous system</strong>&lt;br&gt;Brief review of the functions of the central and peripheral nervous systems. Diagnostic tests used to assess neurological function: radiography, myelography, CT, MRI.</td>
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<td>5.36</td>
<td>Medical disease</td>
<td><strong>Common diseases of the nervous system</strong>&lt;br&gt;Causes, signs, first aid treatment and long-term management of animals with seizures. Causes and signs of conditions of the spinal cord: injuries, intervertebral disc disease. Assisting the veterinary surgeon in performing a full neurological examination. Nursing care, medical management and monitoring of the patient with seizures, spinal injuries and other nervous system diseases.</td>
<td>Good</td>
<td>2</td>
<td>Relevant nutritional management is taught in 5.51-5.52</td>
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<td>5.37</td>
<td>Medical disease</td>
<td><strong>Common diseases of the endocrine system</strong> Causes, signs and treatment of: diabetes mellitus, diabetes insipidus. Management of patients with diabetes mellitus: monitoring urine and blood glucose levels and fructosamine, administration of insulin, exercise regimes, signs and treatment of insulin overdose and feeding regimes. Nursing care, medical management and monitoring of the patient with diabetes.</td>
<td>Good</td>
<td>2</td>
<td>Relevant nutritional management is taught in 5.51-5.52</td>
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<td>5.38</td>
<td>Medical disease</td>
<td><strong>Common diseases of the endocrine system</strong> Causes, signs and treatment of: Cushing's disease, Addison's disease, hyperthyroidism, hypothyroidism, hyperparathyroidism. Nursing care, medical management and monitoring of the patient with endocrine disease</td>
<td>Good</td>
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<td>5.38</td>
<td>Medical disease</td>
<td><strong>Common diseases of the endocrine system</strong> Tests available for confirmation of endocrine disorders: water deprivation tests, ACTH stimulation test, low dose dexamethasone suppression test, endogenous ACTH measurement (special sample handling).</td>
<td>Overview</td>
<td>2</td>
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<td>5.39</td>
<td>Medical disease</td>
<td><strong>Common diseases of the respiratory system</strong> First aid treatment in the event of acute airway obstruction</td>
<td>Overview</td>
<td>2</td>
<td>This is taught in First Aid, Yr 2.</td>
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| 5.40 | Medical disease | **Common diseases of the circulatory system**  
Brief review of the normal structure and function of heart and blood vessels. Measuring and recording normal heart rate, pulse and blood pressure. | Overview | 2 | This is taught in Anatomy & Physiology, Yr 3 and Surgical Nursing, Yr 2 |
| 5.40 | Medical disease | **Common diseases of the circulatory system**  
Common congenital abnormalities. Causes of common diseases of the heart. Signs of acute cardiac failure and nursing care of affected animals. Signs of chronic cardiac failure and advising owners on long term management. Procedures used to diagnose cardiac disease: radiography, ultrasonography electrocardiography. Nursing care, medical management and monitoring of the patient with circulatory disease | Good | 2 | Relevant nutritional management is taught in 5.51-5.52 |
| 5.41 | Medical disease | **Common diseases of the alimentary system**  
Relevant terms: dysphagia, anorexia, pica, inappetance, polyphagia, megaoesophagus, regurgitation, vomiting, diarrhoea, constipation, tenesmus, melena | Good | 2 | |
| 5.41 | Medical disease | **Common diseases of the alimentary system - stomach**  
Differentiating between vomiting and regurgitation. Causes of vomiting (acute and chronic). Nursing care, medical management and monitoring of vomiting patients. | Good | 2 | Enteral feeding is taught in General Nursing, Yr 1 |
| 5.42 | Medical disease | **Common diseases of the alimentary system - intestines**  
Causes and signs of enteritis (acute and chronic). Causes and signs of colitis (acute and chronic). Peritonitis and abdominocentesis. Nursing care, medical management and monitoring of the patient with enteritis or colitis. | Good | 2 | Relevant nutritional management is taught in 5.51-5.52 |
| 5.42 | Medical disease | **Common diseases of the alimentary system**  
Use of the endoscope in diagnosis. | Overview | 2 | |
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| 5.43 | Medical disease       | **Common diseases of the musculo-skeletal system**  
Brief review of structure and function of the skeletal system. Causes, radiological signs and treatment of metabolic diseases of bone: rickets, osteomalacia, metaphyseal osteopathy, secondary nutritional hyperparathyroidism. Causes, radiological signs and treatment of non-metabolic diseases of bone: osteomyelitis, osteosarcoma, osteopathy, pulmonary (metaphyseal) osteopathy, panosteitis, craniomandibular osteopathy, hypertrophic osteopathy, Legge-Calve-Perthes disease. | Overview                  | 2           | Relevant nutritional management is taught in 5.51-5.52                |
| 5.44 | Medical disease       | **Common diseases of the musculo-skeletal system**  
Bones: Importance of suitable diet for growing and adult animals. Balance of calcium, phosphorus, Vitamin D and Vitamin A.  
Joints: Causes, radiological signs and treatment of joint diseases: osteo-arthritis (acute and chronic), osteochondrosis, degenerative joint disease.  
Muscle: Causes, signs and treatment of muscle diseases: myositis, tendonitis.  
Long term treatments for lameness (including neuromuscular and analgesics).  
Nursing care, medical management and monitoring of the patient with musculo-skeletal disease. | Good                      | 2           | Relevant nutritional management is taught in 5.51-5.52                |
| 5.45 | Fluid therapy         | **Fluid therapy**  
Definitions: ion, cation, anion, electrolyte, osmosis, osmotic pressure, isotonic solution, hypotonic solution, hypertonic solution. | Good                       | 2           |                                                                       |
| 5.45 | Fluid therapy         | **Fluid therapy - calculation of deficits**  
Distribution of water within the body. | Good                       | 2           | Distribution and control of body water is introduced in Anatomy & Physiology, Yr 1 |
| 5.45 | Fluid therapy         | **Fluid therapy – acid base balance**  
Maintenance of pH in the body. Causes of metabolic acidosis, metabolic alkalosis, respiratory acidosis, respiratory alkalosis. Collection and storage of arterial sample. Use of information obtained from sample. | Overview                  | 2           |                                                                       |
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| 5.46 | Fluid therapy | **Fluid therapy - fluids**  
| 5.46 | Fluid therapy | **Fluid therapy - fluids**  
Selection of fluids for disease states: acidosis, alkalosis, dehydration, shock, maintenance, haemorrhage. | Overview | 2 |  |
| 5.47 | Fluid therapy | **Fluid therapy – routes of administration**  
Oral: preparation of oral fluids, methods of administration. Intravenous: sites for administration, equipment necessary for administration, precautions against infection, preventing patient interference, inserting an intravenous cannula. Sites for administration, equipment necessary for administration, precautions against infection for the following routes of administration: intraosseous, subcutaneous, intraperitoneal. | Good | 2 |  |
| 5.47 | Fluid therapy | **Fluid therapy – routes of administration**  
Advantages and disadvantages of each route. Reasons for selection of a particular route of administration. | Good | 2 |  |
| 5.47 | Fluid therapy | **Fluid therapy – rates of administration**  
| 5.47 | Fluid therapy | **Fluid therapy – urine output**  
Monitoring urinary output. | Good | 2 |  |
| 5.47 | Fluid therapy | **Fluid therapy – blood transfusions**  
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| 5.47 | Fluid therapy | Fluid therapy – blood transfusions  
Indications for blood transfusion. Reasons for transfusion reactions. | Overview                   | 2           |       |
| 5.48 | Fluid therapy | Fluid therapy - shock  
Clinical signs of shock. Use of intravenous fluids for treatment of shock. Monitoring animals receiving fluid therapy for shock. | Good                       | 2           |       |
| 5.48 | Fluid therapy | Fluid therapy - shock  
Classification of shock: hypovolaemic, cardiogenic, obstructive, distributive, septic. Drugs used in the treatment of shock. | Overview                   | 2           |       |
| 5.48 | Fluid therapy | Fluid therapy – central venous pressure  
| 5.48 | Fluid therapy | Fluid therapy – central venous pressure  
Reasons to measure central venous pressure. Interpretation of results. | Overview                   | 2           |       |
| 5.48 | Fluid therapy | Fluid therapy – total parenteral nutrition  
Routes of administration of total parenteral nutrition. Properties and uses of solutions available for total parenteral nutrition. Precautions for preventing infection. | Good                       | 2           |       |
| 5.48 | Fluid therapy | Fluid therapy – total parenteral nutrition  
Indications for use of total parenteral nutrition. | Overview                   | 2           |       |
<p>| 5.49 | Fluid therapy | Practical class:                                                                 | Good                       | 2           |       |</p>
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| 5.50 | Nutrition | **Nutritionally induced diseases**  
Diseases caused by poor nutritional management. Diseases resulting from deficiency or excess of dietary components: carbohydrate, protein, fat, vitamins and minerals. Taurine deficiency, hypervitaminosis A, hypervitaminosis D, imbalances of calcium and phosphorous, nutritional secondary hyperparathyroidism, eclampsia, hypocalcaemia. | Good | 2 | Routine feeding problems of small animals are taught in General Nursing, Yr 1 |
| 5.51 | Nutrition | **Clinical nutrition**  
Dietary manipulation as part of treatment regimes for medical and surgical conditions. Kidney, GI, pancreas, heart, teeth, skin, brain/geriatric, hepatic | Good | 2 | Enteral feeding is taught in General Nursing, Yr 1. TPN is taught in 5.48. |
| 5.52 | Nutrition | **Clinical nutrition**  