



GENERAL PRACTITIONER CERTIFICATE IN DIAGNOSTIC IMAGING – GPCert(DI)

This syllabus is designed as a guideline to the key areas that the delegate will be expected to understand. For all the subject areas listed below, emphasis should be placed on the practical application of knowledge in typical clinical scenarios. Thus topics within the fields of radiography and ultrasonography are to be covered to a level such that the delegate can directly apply knowledge gained to the performance of imaging studies using these modalities. Other imaging modalities in veterinary diagnostic imaging include computer tomography, magnetic resonance imaging and nuclear scintigraphy; knowledge of these topics is required only in so far as it can be applied to selection of suitable cases for referral to these modalities.

Veterinary diagnostic imaging is discipline, not species based. A full understanding of the subject requires a knowledge of its application through a range of patient species, from large to small in stature. The physical limitations of the various modalities dictate that the range of clinical application of the various modalities is greater in the smaller animals. The syllabus is thus weighted to applications in small animals; however delegates should be able to apply general imaging principles to all species.

The syllabus below describes content. The level of understanding required by the syllabus is also important. The knowledge required in general should reflect additional study and clinical experience beyond that expected of an undergraduate in veterinary science. The certificate is not a specialist qualification so that the degree of familiarity and depth required from the syllabus is at the level appropriate to high quality first opinion encounters with common clinical conditions.

The following terms have been used as a guide to the level of knowledge required:

Declarative: This refers to knowing facts; it is based, not on personal experience or research, but on what has been said or written about the subject. The delegate can demonstrate such knowledge by stating the same facts and ideas in their own words.

Functioning: This refers to the idea of performance of understanding. The knowledge is within the personal experience of the learner, who can demonstrate it by solving problems (e.g. interpretation of diagnostic images).

Principles, technique and interpretation

Principles of ultrasound, equipment selection, machine settings and controls, optimising image quality and avoiding artefacts, image interpretation Principles of radiography, improving image quality, review of different film, screen and grid combinations and their uses, radiographic interpretation Radiation protection.

Radiology of the abdomen I

Technique, normal radiographic appearance and radiographic changes associated with diseases of the liver, spleen, mesentery and peritoneal space Principles of radiographic contrast studies

Film reading

Ultrasound of the abdomen I. Liver, biliary tract and spleen

Technique, normal anatomy and ultrasonographic appearance. Ultrasonographic changes and common diseases

Practical scanning

Radiology of the abdomen II

Technique, normal radiographic appearance and radiological changes associated with diseases of the urogenital and gastrointestinal systems

Use of radiographic contrast studies
Film reading

Ultrasound of the abdomen II. Urogenital system

Technique, normal anatomy and ultrasonographic appearance. Ultrasonographic changes and common diseases

Practical scanning

Radiology and ultrasonography of the thorax (excluding heart, lungs and vasculature)

Radiology and ultrasonography of the thoracic wall, pleural cavity and mediastinum: technique, normal anatomy and signs of disease

Film reading

Orthopaedic radiology I

Fracture classification, fracture healing and complications.

Radiographic signs and differentiation of infection, neoplasia and degenerative joint diseases

Metabolic and nutritional bone disease

Film reading

Orthopaedic radiology II. Specific conditions of the forelimb, hindlimb and vertebral column.

Technique, normal radiographic appearance and radiographic changes associated with diseases of the forelimb, hindlimb and vertebral column

Film reading

Echocardiography

Normal echocardiographic examination and standard views, normal anatomy and physiology

Ultrasonographic diagnosis of disease – pericardial disease, myocardial diseases, valvular diseases and cardiac shunts

Practical scanning

Radiology of the heart, lungs and vasculature

The heart, lungs and thoracic vasculature: technique, normal radiographic anatomy and radiographic signs of diseases

Film reading

Ultrasound of the abdomen III. Other abdominal organs and abdominal cavity

Ultrasonography of the normal and abnormal intestines, pancreas, adrenals, peritoneum, mesentery and abdominal wall

Practical scanning

Special techniques in radiology and ultrasound

Doppler techniques, ultrasound guided biopsy and aspiration techniques. Advanced radiographic contrast studies

Radiology of the head and vertebral column

Radiography and radiology of the head

Film reading and reporting of clinical cases

Radiography and radiology of the vertebral column

Film reading and reporting of clinical cases



Cross sectional imaging MRI and CT in small animals

Strengths and limitations of MRI and CT imaging

Major abnormalities seen on each modality

Making informed choices in selecting either of these modalities