



Equine Thermography 6 day Foundation Certificate

Agenda.

Day 1:

What is Thermography?

Physics of Infrared

- The Thermal Imaging camera
- Emission & Reflection
- Emissivity (excitant radiation)
- Reflection (incident radiation)
- Measurement rules
- Qualitative and Quantitative

Thermal Tuning

- Level & Span
- Colour Pallets
- Image composition

Heat

- Heat & Temperature
- Heat Transfer

Camera Operation

- Practical exercises
- Software downloads to laptops
- Software exercises

Finish



Day 2:

Thermoregulation of the Equine

- Environmental conditions and the Equine
- Different compartmental temperatures of the Equine
- Heat production

Mechanisms by which a horse exchanges heat

- Radiation
- Conduction
- Convection/Forced convection
- Evaporation
- Environmental conditions effecting thermoregulation.

Successful Equine Imaging

- General guidelines
- Equine Imaging guidelines

Baseline studies:

Artefacts

- Dynamic processes
- Effects

Examination

- Protocol
- Procedure

Preparing the horse for imaging

- Equipment
- Beginning examination
- Guidelines for examination

Afternoon Practical

Finish



Day 3

Applications of Thermography in Horses

Thermography as a non-invasive modality

- Contact
- Non-contact
- Technology

Factors that determine skin temperature

- Trauma or inflammation
- Thermal patterns

Clinical Use

- Clinical entities
- Bone injuries
- Back injuries
- Muscle strain
- Tendon and Ligaments

Physiology

- Physiology of blood flow -
Control
Influences - Rider effect/ Training aids
Patterns
- Relationship between blood flow and temperature

Patho-physiology

- Inflammation
- Effect of injury on temperature
Acute
Chronic
- Effect on different structures

Afternoon Practical

Finish



Day 4

Injuries in the Equine during exercise, training and performance.

What types of injuries to look for in horses doing different activities and sports?

- Disciplines
- Injury types
 - Accidental injuries in different sports
 - Training associated injuries in different sports
 - Studies
- Structures vulnerable to external trauma.
 - Superficial trauma
- Preventative maintenance

The use of Thermography as a monitoring tool for performance horses.

- Training
- Performance
- Recovery

Exercise and effects of exercise on physiology

Recovery- monitory horses in rehabilitation.

Afternoon Practical

Finish

Day 5

All day Practical – Imaging horses software downloading and reporting

Exercising horses using Thermography film to identify muscle atrophy/other conditions.

Open discussions.



Day 6

Practicals

Exam and practical assessment

Case studies

Research

CPD days

Marketing & promotion

Close

Please note all students must come equipped with laptops and memory sticks

Please inform us if you use the new Windows 7 software.

**There is also the opportunity for students to ride while they are here and also bring their horses along at the cost of £50 per night
(Please bring own hay and feed)**

All students may contact Sandie Chambers on 07957 529 570 at any time with concerns or questions during the week of the course.



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