# The 'Core of Knowledge'

## *Essential Training for all Laser/Light Practitioners*

**What is the 'Core of Knowledge'?**

'Core of Knowledge' is the minimum training for authorised users, laser protection supervisors (LPS) and assisting staff using lasers (Class 3R, 3B and 4) and Intense Light Source (ILS)/IPL equipment. The MHRA document suggests all laser/light users should attend an initial 'Core of Knowledge' course, with refresher training at least every five years.

The Core of Knowledge course should be delivered by persons who have a high level of knowledge and understanding of different optical radiation devices systems, optical radiation safety and the hazards associated with the equipment, e.g. a certified Laser Protection Adviser LPA). The content and depth covered in core of knowledge courses may be tailored to healthcare professionals who work in a medical setting, and/or general healthcare area, and/or cosmetic environment, in which case, the course certificate should clearly indicate which specialty has been covered.

The Core of Knowledge syllabus indicates the content that should be covered but the content depth will depend on the differing needs of the healthcare professionals. Course lectures should generally total between 2 and 3 hours depending on course and content depth. Ideally the Core of Knowledge course should also include practical exercises on risk assessment, safety administration and equipment management.

**Core of Knowledge syllabus:**

**Fundamentals of optical radiation devices and their interaction with tissue**

- Understand how the different types of optical radiation are produced, what types of active media are used, and emission modes and delivery systems.
- Understand the characteristics of optical radiation emitted from different types of equipment.
- Be familiar with the intended purpose of the optical radiation equipment.
- Understand the effects of optical radiation exposure to eyes, skin and other tissue.

**Hazards and how to control them**

- Understand the principles of risk assessment.
- Be aware of the effects of exposure and health hazards, including eye, skin and tissue, which can arise from the use of laser, IPL or other optical radiation equipment.
- Be aware of the basic principles of the maximum permissible exposure levels and how to keep exposure of unprotected skin and eyes below these levels.
- Understand the hazards from optical radiation equipment, including optical beams, electrical hazards, equipment malfunctions, fire risks and smoke plume effects.
- Understand the hazards to patients and clients and the methods of minimising risks.
- Understand the hazards associated to the different staff groups and methods for minimising risks.
- Understand the hazards from reflections or absorption of the optical radiation beam with respect to instruments, or reflective surfaces, or other equipment.
- Understand the hazard control procedures, including the use of personal protection.
- Be familiar with the additional precautions that may be necessary when undertaking non-routine activities with the equipment.

**Safety management**

- Be familiar with the basic principles of the administration of safety.
- Be aware of the relevant legislation, standards and hazard classifications relevant to lasers, IPLs and LEDs.
- Understand the safety procedures and policies governing optical radiation equipment use, including the local rules, and controlled area.
- Understand the role of the laser protection adviser, laser protection supervisor, authorised users and assisting staff.
- Be aware of the principles and requirements of equipment quality assurance processes and procedures.
- Be aware of the meaning of the warning labels and signs associated with optical radiation equipment.
- Understand the general principles of emergency action and how to report accidents.

Reproduced from: MHRA: Lasers, intense light source systems and LEDs – guidance for safe use in medical, surgical, dental and aesthetic practices. September 2015. pp 67-68, which you can access via MHRA Guidance Document

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## How to choose your training provider

Just because there is a set syllabus for 'Core of Knowledge', it doesn't mean every company or instructor will be good at delivering it. When choosing your training provider you should try and find out:

- Who will be delivering the course – are they experienced and qualified tutors with an ability to teach and a background in laser/ILS technology or applications?
- Does the course cover the full syllabus or just concentrate on a particular make or model of laser/device device?
- Does the course provide comprehensive reference notes or just copies of the teaching slides?
- Will the course provide useful and practical safety information that can be applied to your facility?
- Will it be possible to talk about particular technologies, applications or safety concerns with the tutor?
- Can the course be tailored to a particular laser/ILS application or discipline?
- Will there be time for questions and discussion?
- How many other delegates are likely to be on the course, and what is the mix of backgrounds?
- Will the tutor/course provider offer help after the course if you need more information or want to attend further courses?
- Are there testimonials from delegates that attended previous courses?
- Is the course accredited, CPD rated or recognised by other organisations?
- Are the Certificates of Attendance pre-printed, issued on the day. or sent out afterwards?
- Are lunch and refreshments included, and do they cater for dietary needs?
- Is the venue easy to find, is parking available, can it accommodate any mobility or special needs?

Laser Education would like you to choose us as your training provider. and we will be happy to answer any questions you have about the 'Core of Knowledge' or about courses we can develop specifically to meet your training needs – whatever your laser/ILS technology or application.

For quality training, education and Laser/ILS Protection Advice please contact:

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