

Class IV Laser Therapy in Clinical Practice

8-hour CE class

Topic schedule and time per topic

Note: The seven main topics are free-standing, the order of presentation may vary at the instructor's discretion.

- A. Introduction – 1.0 hour
 - a. History review of PBM and class 4 laser
 - b. Review of new conditions and treatments
 - i. IPF, oral mucositis, regenerative medicine
- B. PBM Studies and Research – 1.5 hours
 - a. In vitro studies
 - b. Small animal studies
 - c. Human studies
 - d. Musculoskeletal studies
 - e. Neurological Studies
 - f. Other types of studies
 - g. How to apply study results to practice
- C. Photobiomodulation (PBM) science and physiology – 1 hour
 - a. Laser parameters: power, wavelength, delivery mode, power density, energy density, dosage
 - b. Wavelengths and chromophores: absorption curves, effects of wavelengths
 - c. Delivery mode: continuous wave, pulsed and combinations
 - d. Lasers versus light emitting diodes
 - e. Depth of penetration studies
 - f. Laser therapy terminology: cold laser, hot laser, LLLT
 - g. PBM mechanisms: intracellular, extracellular, cell membrane
 - h. Physiological effects: pain reduction, inflammation reduction, tissue healing
- D. Treatment discussion – 1 hour
 - a. Review of physiology
 - b. Proper treatment techniques
 - c. Proper laser parameters for body parts and conditions
 - d. Discussion of treatments from head to toe: head, sinus, spine, extremities, sports injuries, other conditions
- E. Neuropathy – 1 hour
 - a. The problem of neuropathy
 - i. Statistics, incidence, risk factors, causes
 - ii. Classifying neuropathy
 - iii. Medical perspectives
 - iv. Signs and symptoms; physical exam
 - b. PBM for neuropathy
 - i. Mechanisms and studies

- ii. Treatment techniques
 - iii. Treatment plans and expectations
 - iv. Patient outcomes
- F. Laser safety & Risk Management – 1 hour
 - a. State laws and regulations
 - b. ANSI Z136.3, Safe Use of Lasers in Healthcare Facilities
 - i. Laser Safety Officer (LSO)
 - ii. Laser safety precautions, signs, documentation
 - c. Laser contraindications
 - i. Absolute and relative
 - ii. Reactions to treatment
 - d. Risk management
 - i. Malpractice
 - ii. Adverse events
 - iii. Patient Records
- G. Hands on Treatment practice – 1.5 hours
 - a. Demonstration and discussion of laser therapy treatments
 - b. Tips and tricks for effective treatments
 - c. Proximal to distal and range of motion
 - d. Incorporating laser together with other treatment techniques, such as chiropractic adjustment, spinal decompression, soft tissue work, etc.