



### **Therapeutic Modalities Seminar Description**

Incorporating thermal and electrical modalities as an adjunct intervention within a treatment plan can enhance patient outcomes. This comprehensive hands-on course will emphasize the application, theory, and evidence behind the use of both thermal and electrical modalities in clinical practice. The lectures, lab practice, case studies, simulation, and demonstration will foster critical thinking skills to enable practitioners to select and use therapeutic modalities applied to a variety of patient conditions. Collaboration with course instructors and participants is encouraged to apply the information learned and skills practiced directly to the participants practice settings.

**Topics covered:** indications, contraindications/precautions, methods of application for superficial heat and cold modalities, ultrasound, and electrical modalities. Also covered are evaluation principles pertinent to modality selection and a brief review of upper quarter anatomy to assist with application of physical agent modalities, and a discussion on ethics, documentation, and the economics of therapeutic modalities.

**Modalities covered:** Moist heat packs, paraffin wax treatment, fluidotherapy, ultrasound, cold packs, ice massage, contrast bath, neuromuscular electrical stimulation (NMES), transcutaneous electrical stimulation (TENS), interferential current (IFC), high voltage pulsed current (HVPC), and iontophoresis (IO). An introduction to biofeedback will also be included.

This hybrid course will be delivered via online modules with quizzes and nine hours of recorded lectures and readings, which will be available by April 19, 2023. The completion date for these modules is May 5, 2023. The lab portions of the course will consist of seven hours of interactive (in-person) sessions on Saturday May 6, 2023, at Northwestern University in Downers Grove, Illinois. Lecture outlines and PowerPoints will be delivered electronically. Lab handouts will be provided. Course participants will demonstrate knowledge of the rationale and clinical reasoning for use of physical agents in current occupational therapy practice.

**This course will provide 16 hours of didactic training and laboratory experience necessary to meet the standards of the state of Illinois Occupational Therapy Practice Act for use of physical agent modalities.**

**Learning Objectives** - Upon completion of this seminar, participants will:

1. Apply evidence to select and apply therapeutic modalities within a patient's treatment plan.
2. Identify and describe indications and contraindications pertinent to using thermal and electrical modalities with patients.

3. Utilize patient case scenarios to select the most effective modality and the appropriate parameters to increase performance of occupations.
4. Demonstrate safe and effective application of thermal and electrical modalities in an occupational therapy treatment plan.
5. Apply the economics and ethics of using modalities to practice

#### **Recorded modules with lectures, readings, and quizzes**

Nine hours to be completed before Lab sessions on May 6, 2023. Modules will be available by April 19, 2023.

- Introductions & Course Overview
- Ethics, Economics, Evaluation, & Documentation
- Upper Quarter Anatomy Review
- Principles of Electrical Stimulation
- Neuromuscular Electrical Stimulation (NMES)
- Transcutaneous Electrical Nerve Stimulation (TENS)
- Interferential (IFC)
- Iontophoresis (IO)
- High Volt Pulsed Current (HVPC)
- Electrical Stimulation Discussion & Questions
- Superficial Thermal Modalities: Heat & Cold
- Ultrasound

#### **Lab activities in-person at Northwestern University in Downers Grove, Illinois**

Saturday, May 6, 2023: 8:30 am – 4:30 pm

- LAB 1: Electrical Stimulation, parameters, electrode placement
- LAB 2: Neuromuscular Electrical Stimulation (NMES)
- LAB 3: Transcutaneous Nerve Stimulation (TENS) & Interferential (IFC)
- LAB 4: Iontophoresis (IO) & High Volt Pulsed Current (HVPC)
- LAB 5: Superficial Thermal Modalities & Ultrasound
- Electrical Stimulation Case Studies: Laboratory Practice & Discussion
- Questions, Post-test, Turn in course evaluation

#### **Bios of the Course Instructors**

**Dana Lingle, OTD, OTR/L, CHT** has been an Occupational Therapist for 36 years practicing in upper extremity rehabilitation, academics, inpatient rehabilitation, geriatrics, and home health care. Dr. Lingle is an Academic Fieldwork Coordinator and Assistant Professor in the Occupational Therapy Program at Northwestern University. She teaches a variety of courses: physical agent modalities, orthotics, ergonomics & universal design, anatomy, and upper extremity evaluation & treatment. She has been a Certified Hand Therapist (CHT) since 1995 and has practiced at an outpatient hand therapy clinic for 29 years.

Dr. Lingle completed her Doctorate in Occupational Therapy degree from University of St. Augustine in 2020, Master of Health Science degree from the University of Indianapolis in 2010 and Bachelor of Science degree in Occupational Therapy from Eastern Michigan University in 1984. Dana has presented continuing education courses and lectured locally, nationally, and internationally on a variety of topics including physical agent modalities, shoulder rehabilitation, ergonomics, orthotics, peripheral nerve injuries, and more. Dr. Lingle is an active member of AOTA, ASHT, and ILOTA and is co-chair of the Orthopedics and Upper Extremity Rehab SIS for ILOTA.

**Susanne Higgins OTD, OTR/L, CHT** graduated from University of Illinois with a Bachelor of Science degree in Occupational Therapy in 1981. She earned her Master of Health Sciences degree at University of Indianapolis in 2010 and completed her doctorate in occupational therapy at Rocky Mountain University of Health Professions in 2016. She has been a Certified Hand Therapist (CHT) since 1992 and a charter member of the ASHT since 1988. She serves as a volunteer for the Education Division of the American Society of Hand Therapists. She is the co-chair of the Orthopedics and Upper Extremity Rehab for the Illinois Occupational Therapy Association.

Dr. Higgins is an Associate Professor of Occupational Therapy at Midwestern University and for 15+ years has been teaching courses such as kinesiology, orthotics, upper extremity rehabilitation, physical agent modalities, anatomy along with administration, leadership and program development. She has presented continuing education courses on a variety of topics related to upper extremity rehabilitation locally and internationally. Her clinical practice is in outpatient orthopedics in the western suburbs of Chicago

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