

Generator to administer the CNS and Sensitivity questionnaires – and the symptom rating forms through the Report Generator.

**Day 3 Objectives:** To demonstrate the management of data from its export from LENSware, to its import and generation of information, treatment plans, and treatment evaluation in the Report Generator.

**Content: (20 Minutes)**

- About data: where it's located; copying (processing) into the Report Generator
- Processing, or importing, session data

**Objective:** To provide practice for attendees in making topographic maps and offset evaluations.

**Content**

- Practice with the Report Generator **(1 hour, 30 minutes)**
  - Importing
  - Choosing reports
  - Viewing and printing reports
  - Combining sessions for maps
  - Correcting sensor sites
  - Replacing lost reports
  - Relocating sessions if incorrectly stored
  - Updating software

**Objectives:**

- To present ways to integrate the historical, clinical, and EEG data into something that makes sense to the clinician and prospective client.

**Content:**

- **III: Developing Clinical Skills: – 2 Hours (less 15 mins for break)**
  - Tools of Evaluation:
  - Clinical Interview
  - The CNS Questionnaire
  - The Reactivity, Suppression, Hardiness questionnaire
  - Reading the Offset Evaluation
  - The Map as a session treatment plan

**Objectives:**

- Integration of data related to dose, patient characteristics, and patient education

**Content: (2 hours)**

- Hierarchy of Procedures
- Didactic on dose, sensitivity, reactivity, fatigue, suppression, hardiness, and the nature of the stimulation and its effect on different clinical problems

- **Questions, Discussion, Exam and Evaluation (1 hour)**

- The offset as a pressure on the dominant frequency to move out of its habitual excursion
- Positive and negative offsets and the tendency of the dominant freq to be higher and to function well

**Objective:** To present CNS problems as problems with stimulation; To discuss major patient variables: sensitivity, reactivity, suppression, fatigue, and hardiness

**Content: (90 Minutes)**

- Stimulation, under- and over
- Sensitivity and Reactivity
- Suppression and Hardiness
- Pairing the procedure used with the Reactivity of the individual (Hierarchy of Procedures)

**Objective:** To underscore the importance of cortical (vs. subcortical) competence, as well as some of the other qualities, as well as the process of transitioning between cortical competence and incompetence, and back again.

**Content: (45 Minutes)**

- Cortex: Its function as an inhibitor to subcortical activity
- Selective permeability, dysfunction, and the permitting of selected band activity to be recorded at the scalp leading to the appearance of band activity
- Functional versus structural impairments and improvements

**Objective:** To demonstrate the process of mapping in USE 3 with the LENS approach.

**Content: (4 hours)**

- Practice Mapping
  - Restarting USE 3
  - Selecting Mapping
  - Attaching Electrodes and the path for re-setting Electrode site
  - Impedance considerations
  - Running sessions
  - Saving and Exporting data
  - Trimming data
  - Joining charts done on separate days

### **Day 3 The Report Generator:**

**Abstract for Day 3:** Practice in performing feedback after considering how to put together information from the Offset and Mapping evaluations. Session three with the patient will occur, demonstrating the integration of the information heard and practiced. Consideration of relationship of dose to sensitivity and reactivity, suppression, and hardiness, especially related to session timing, offset movement, number of sites, feedback vs. background hum. Using the Report

improvements are some of the areas covered. A second session with the participant will be done to illustrate part of the evaluation. Mapping reports will be explicated, demonstrated, and illustrated in the third session with the patient. Practice will be given in the Map administration and evaluation. Participants will get practice in performing topographic brain maps. Suppression and suppression maps are to be introduced..

### **Day 2 Objectives:**

- a. To provide a theoretical and conceptual overview of the LENS approach, especially in relation to the theory, concepts, and practices of traditional neurofeedback.
- b. To define the core paradigms and principles of the LENS approach so that the central elements, issues, approaches, and practices make sense to the attendees
- c. To summarize work with the evaluation so far to form a basis for considering topographic mapping.
- d. To concretize the paradigms and principles by the use of the Report Generator to show how it becomes a tool to generate treatment plans and treatment re-evaluations.
- e. To illustrate issues important in the conduct of the LENS approach so that the clinician can more intelligently inform the prospective client about the risks and benefits of his/her particular involvement.
- f. Introduction to EEG suppression through the use of the suppression maps, showing site sorts according to the coefficient of variation.
- g. Demonstrate the use of the Report Generator in relation to mapping, data management, and treatment planning

### **• Paradigms and Principles:**

**Objective:** To provide the LENS system with both a biofeedback and neurofeedback context.

**Content: (15 Minutes)**

- Didactic: Placing LENS within the field of Neurofeedback
- Objective: To provide a conceptual context for the LENS

**Objective:** To describe areas to which the LENS applies as well as to begin to describe the core concepts underlying how the LENS works.

**Content: (90 Minutes)**

- Areas of Applicability of the LENS
- The core algorithm: Dominant Frequency
- Offset
  - Defined
  - Purpose
  - Effects on the dominant frequency

**Objective:** To describe the conceptual basis for the formulation of treatment planning

**Content: (25 Minutes)**

- Concepts emerging from the Offset Evaluation and Map: Empirically deriving the Offset and Site Treatment Plan
- Sensitivity, Hardiness, and Reactivity; the CNS questionnaire.

**Objective:** To introduce LENSware: turning it on and off, the toolbars, and saving and exporting data.

**Content:**

**Introduction to Use LENSware: (60 Minutes)**

- Features of the graphic interface
  - Entering LENSware
  - The Screen Menu
  - The Session Controls
  - The Display Controls
  - Saving and exporting data
  - Excel and troubleshooting

**Objective:** Provide practice in turning LENSware on and off, working session and display controls, and saving and exporting data.

**Content: (110 Minutes)**

- **Practice with screen elements: –**
  - The Instruction Summary as the source of all instructions
  - Client data
  - Choosing Applications
  - Sensor site and impedance
  - Stopping the session
  - Exiting
  - Updating software
- How to set up and run an Offset Evaluation

**Objective:** Provide practice selecting and running various types of introductory evaluations, including applying electrodes, running sessions, exporting and importing data into the report generator, generating reports, and evaluating the results.

- Practicing Initial Evaluations (**2 hours, 40 minutes**)

## • **Day 2: USE 3 and Mapping**

**Abstract for Day 2:** The essential concepts, core paradigm, principles, and areas of applicability. Dominant frequency, frequency offset, feedback frequency, sensitivity, hyper- and hypo-reactivity to stimulation, cortical permeability and integration, and structural vs. functional impairments and

## **Day 1: Theory and Concept: Understanding the Bases of EEG-Driven Stimulation**

**Abstract for Day 1:** The essential concepts, core paradigm, principles, and areas of applicability. Dominant frequency, frequency offset, feedback frequency, sensitivity, hyper- and hypo-reactivity to stimulation, cortical permeability and integration, and structural vs. functional impairments and improvements are some of the areas covered. A first LENS session will be done with a 2 patients to demonstrate intake and initial decision making. Features of the LENSware software: how to turn it on and off; features of the screen menus, session controls, display controls, saving and exporting data. Finally, participants will be introduced to LENSware; A first Session will be practiced by participants on each other. Interview variables such as sensitivity, hardiness, and reactivity, the administration of the CNS questionnaire, and topographic map reading will be introduced

(duration of each item in parens, with 15 minutes out for break)

- **Paradigms and Principles:**

### **Day 1: Objectives**

- a. To define the core clinical principles of the LENS approach so that the central elements, issues, approaches, and practices make sense to the attendees
- b. To have participants start and stop LENSware, and manipulate the essential controls.
- c. To have participants conduct an initial evaluation.
- d. The concepts of sensitivity, hardiness and reactivity will be introduced, as will be the CNS questionnaire. To cover the basics of topographic map reading as one of the cornerstones of treatment.

### **Objective:**

Presentation of clinical material re hurdles in treatment, changing protocols, how to provide a context for the feelings they encounter and will probably experience.

### **Content: (20 Minutes)**

- **Evaluating Response to Treatment:**
  - Preparing the client for Overdose
  - Distinguishing overdose from experiences to go through
  - Processing Overdose
  - Changing Protocols
  - The Topography of Healing