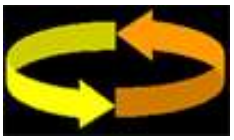

BioNeurofeedback Treatment Center

INSTRUCTOR: Celeste De Bease, Ph.D., BCB, BCN email: DrDeBease@BioNeurofeedback.com

WIDENER UNIVERSITY'S BCIA NEUROFEEDBACK

DIDACTIC COURSE SYLLABUS

This course material is designed to meet the didactic requirements for BCIA (Biofeedback Certification International Alliance) certification in Neurofeedback (EEG Biofeedback)

Catalog Description: Applied Psychophysiology using bioneurofeedback has emerged as a valuable behavioral-based treatment intervention for a wide variety of disorders of the autonomic and central nervous system. This course will focus exclusively on EEG-biofeedback (neurofeedback).

Educational Objectives: Provide the required didactic instruction for BCIA certification in Neurofeedback. Discuss clinical assessment, protocol development, and client care in the use of neurofeedback

Course Text: Demos, John, 1st ed. (2005). Getting Started with Neurofeedback, Norton, New York.
DO NOT PURCHASE THE 2nd EDITION (this covers more advanced materials)

Grading/Evaluation: complete the 2 post-lecture tests and send them to Dr. De Bease for grading (via email or traditional mail). You need to pass with a grade of 75%. You can retake any test after a review of the correct responses. Once the 2 tests are completed, you will receive a Certificate of Completion from BioNeurofeedback and BCIA will be notified that you have completed the didactic requirement towards certification in neurofeedback (if you are seeking certification).

Note regarding readings: Articles in pdf format are provided in the course. Links to web sites for demonstrations are also provided.

Also provided are note pages of the slides with either 3 per page or 9 per page

Lecture 1 Orientation to Neurofeedback (4 hours)

Definition of Neurofeedback (EEG Biofeedback)
History and Development of Neurofeedback
Overview of principles of human learning as they apply to neurofeedback
Assumptions underlying Neurofeedback

Readings: Demos – Chapter 1
Conditioning of Induced EEG Sleep Patterns in the Cat.pdf
Operant Conditioning of EEG Rhythms.pdf
Optional: Deactivation of the Brain Areas during Self-Regulation.pdf
Discourse on the Development of EEG Diagnostics & Biofeedback for ADHD

Lecture 2 Basic Neurophysiology & Neuroanatomy (4 hours)

Neurophysiology
Functional Neuroanatomy

Readings: Demos – Chapter 2
Differences between EPSP and Action Potential.pdf
Coherence a measure of the brain networks.pdf

Lecture 3 Instrumentation & Electronics (4 hours)

Essential Terms & Concepts
Signal Acquisition
Signal Processing
Aseptic Techniques
Instrumentation Demonstration

Readings: Demos – Chapters 3, 4, 5, 6, 7
EEG Power-Spectral and Coherence Differences.pdf
Infection Risk Mitigation.pdf
EEG Demo Videos:
https://www.youtube.com/watch?v=vniog26Qp94 – Preparing for your EEG
https://www.youtube.com/watch?v=1xT_bnv0mCc – Measuring and Marking the Head
https://www.youtube.com/watch?v=XMizSSOejg0 – Introduction to EEG

Lecture 4 - Research Evidence Base for Neurofeedback (2 hours)

Determining levels of efficacy and effectiveness of neurofeedback
Key research studies establishing current efficacy levels of major applications of Neurofeedback

Readings: Evidence Based Practice in Biofeedback and Neurofeedback Summary.pdf

Template for Developing Guidelines.pdf

Lecture 5 Psychopharmacological Considerations (2 hours)

Potential effects of prescribed and non-prescribed drugs on clinical presentation, on EEG measures, and on neurofeedback assessment and training

Lecture 6 Patient/Client Assessment (4 hours)

Intake Assessment
EEG Assessment
Ongoing Assessment
Instrumentation Demonstration

Readings: Demos – Chapters 8, 9, 10, 11
QEEG Tutorial.pdf
QEEG Sample Report 1.pdf
QEEG Sample Report2.pdf
EEG Demo Video - https://www.youtube.com/watch?v=-5djHvFo7IQ

Lecture 7 - Developing Treatment Protocols (6 hours)

Evolution of neurofeedback protocols
Steps in protocol development and treatment planning
Demonstration and case example exercises for practice

Readings: Demos – Chapter 12, re-read chapters assigned for Lecture 3

Lecture 8 - Treatment Implementation (6 hours)

Client preparation for neurofeedback
Therapeutic relationship, coaching, and reinforcement strategies
Procedures and mechanics of conducting a neurofeedback session
Introduction to Alpha-Theta Training
Guidelines and Cautions for Remote Training
Full Neurofeedback Session Demonstrations

EEG Demo Video (montages) https://www.youtube.com/watch?v=AcW97nMLGEs&t=622s
Readings: Demos – Chapter 13
Alpha-Theta_Therapeutic_Implications.pdf
ISNR_Guidelines_Remote.pdf
Handout-10-10-System.png
First, Do No Harm.pdf

Lecture 9 Current Trends in Neurofeedback (2 hours)

Identify current trends such as z-score training, LORETA z-Score training, etc.
Combining neurofeedback with other modalities

Readings: Demos – Chapter 14
ILFNB.pdf

Lecture 10 Ethical & Professional Conduct (2 hours)

Ethical and Legal Practice Familiarity, Clinical Practice, Scope of Practice, Client rights, Supervision, and Professional relationships

Readings: Demos – Chapters 15, 16, 17
ISNR Code of Ethics.pdf
ISNR Practice Guidelines.pdf
Duffy: The State of EEG.pdf
Professional Standards and Ethical Principles in Biofeedback