BioNeurofeedback Treatment Center

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

BCIA Preparatory PowerPoint Course

This course material is designed to meet the didactic requirements for BCIA (Biofeedback Certification International Alliance) certification in general biofeedback also referred to as 'the 48 hours'.

The course content includes audio 10 lectures presented with PowerPoint slides.

A sample of the audio PowerPoint is available at
http://www.bioneurofeedback.com/training.htm
Note: you will be asked to download Adobe Flash Player (link to download is on this page) and you'll need to make sure your web browser is not blocking the material.

The BCIA Blueprint (referred to as the 48 hour didactic) is fully covered.

LECTURE	BCIA BLUEPRINT AREA	LECTURE CONTENT
1	I	History-Concepts-Learning
2	II	ANS Stress-Coping-Illness
3	III	Psychophysiological Recording
4	IV	Surface EMG
5	V	ANS Applications – Intake Procedures
6	V	ANS Applications – Thermal biofeedback
7	V	ANS Applications – Cardiovascular
8	V	ANS Applications – Electrodermal Activity
9	VI	EEG Applications
10	VII & VIII	Adjunctive Interventions-Professional Conduct

Biofeedback concerns itself with aspects of mind-body interactions; recognizing that optimal functioning and health contribute to emotional well-being. Psychophysiological treatments and biofeedback techniques are used in clinical, sports, business and educational arenas as well as many others. I hope you find this an exciting learning adventure.

1. History-Concepts-Learning – This first lecture entitled "Biofeedback Psychophysiological Training" covers the elements in the BCIA blueprint in under section I Orientation to Biofeedback. The lecture answers "what is biofeedback and what is psychophysiology" and covers applied psychophysiology, including a history of psychophysiology, cybernetic and learning theory and biofeedback, definitions of biofeedback, a history of biofeedback, clinical applications of biofeedback training, the history of EMG and EEG biofeedback, important research studies, popular biofeedback techniques, feedback schedules, efficacy, biofeedback and the mind-body movement, and complimentary alternative medicine.	**6. Autonomic Nervous System (ANS) Applications: Thermal (Temp) biofeedback –** Psychophysiological Concepts, psychophysiological responses, types of stress, vascular disorders, migraine, Raynaud's, hypertension, the structure and function of the autonomic nervous system, sympathetic and parasympathetic divisions, circulatory system, peripheral hand temperature, thermal biofeedback, general relaxation strategies, biofeedback assisted relaxation, breath training, hyperventilation, physiological mechanisms underlying skin temperature, single pointed concentration, blood volume pulse, Migraine, Raynaud's, thermal biofeedback, hypertension, blood pressure.
2. The Autonomic Nervous System (ANS) Stress, Coping and Illness – The second lecture covers the structure and function of the nervous system, parasympathetic and sympathetic branches, Canon's fight / flight response, acute stress, Selye's General Adaptation Syndrome, chronic stress, autonomic balance and psychophysiological flexibility, perceptions and psychosocial mediators of stress, biofeedback and classical conditioning, cognitive, behavioral and physiological aspects of the stress response, autonomic measures, correlates of arousal and biofeedback measures.	**7. Autonomic Nervous System (ANS) Applications: Respiration & Respiratory Disorders, Cardiovascular System and Disorders –** The first part of this seventh lecture covers the respiratory system, including CO_2 functions, hypocapnia, functional respiration dysfunction, biofeedback assessments of respiration rate, treatments, and a complete breath training program. The second part covers the cardiovascular system and disorders including, physiological basics, heart rate, high blood pressure and psychophysiological treatments, and heart rate variability (HRV).
3. Psychophysiological Recording – This lecture describes the most commonly employed biofeedback modalities: sEMG, skin temperature, electrodermal activity, EKG and heart rate, respiration, EEG, and introduces the student to sensors and sensor placements, characteristic signals; signal processing and feedback displays; use of computers in biofeedback; sources of artifact and their effects on physiological recordings, and essential electronic terms and concepts for biofeedback applications, such as electrode impedance, signal-to-noise ratio, bandpass, peak-to-peak voltage, root mean square .	**8. Autonomic Nervous System (ANS) Applications: Somatic & Cognitive Anxiety Electrodermal Activity –** Somatic and cognitive anxiety, the stress response, the physiology of electrodermal activity (EDA), history of Galvanic Skin Resistance (GSR) in physiology, Tarchanoff Response, Jungian use of GSR, skin conductance and skin resistance, Ohm's law and GSR, biofeedback session, the GSR pattern is labile, measuring GSR, treatments using GSR, the impact of diversity on psychophysiology.
4. Surface EMG – This lecture covers muscle anatomy and physiology; antagonistic and, synergistic muscle groups; central nervous system, chronic neuromuscular pain; general treatment considerations; target muscles, typical electrode placements, and SEMG treatment protocols for specific neuromuscular conditions.	**9. EEG Biofeedback (Neurofeedback) Electroencephalography, Operant condition of the central nervous system, learned normalization of EEG patterns –** This lecture covers organization of specific central nervous system, structures and neurotransmitter pathways, EEG patterns and their behavioral correlates, including delta, theta, alpha, beta, and SMR frequency ranges, clinical uses and efficacy of EEG biofeedback, potential effects of prescribed and non-prescribed drugs on clinical presentation, EEG measures, and Entrainment stimulation.
5. Autonomic Nervous System (ANS) applications. Intake Procedures-The Psychophysiological Stress Profile (PSP) – The fifth PowerPoint in the series covers the structure and function of the autonomic nervous system; psychophysiological concepts, and general applications of autonomic biofeedback; Pathophysiology, biofeedback modalities, and treatment protocols for specific ANS biofeedback applications.	**10. Adjunctive Interventions-Professional Conduct –** This 10^{th} and final lecture in the series first covers intake procedures relaxation methods, and cognitive interventions. The lecture then continues on professional conduct including; responsibility and competence, legal versus ethical requirements, client rights, supervision and consultation and professional relationships.

Course Objectives

1. To acquire knowledge regarding the field of biofeedback and psychophysiology and to obtain the necessary didactic information for BCIA certification in general biofeedback.

2. To provide students with knowledge of the psychophysiological mechanisms that influence, shape and impact the mind and body.

3. To ensure students are knowledgeable of the theoretical concepts, both foundational and current, which have formed the general body of knowledge concerning mind-body interactions and their impact on disease and dysfunctional states.

Prerequisites for participation

This course is available to all. However, if you wish to use this course to meet part of the didactic requirements for BCIA certification in general biofeedback, you need to meet the BCIA pre-educational specified requirements. Please refer to the BCIA web site for this information. www.bcia.org

Tuition $575.00 US.

Process for registration

Sent an email requesting registration materials to drdebease@bioneurofeedback.com or drdebease@verizon.net

Schedule & format for learning

Total Course Time: 48 hours. Fully covers the BCIA blueprint of learning. This is a self-directed, self-paced course which includes an audio lecture with PowerPoint slides.

- Lectures: 20 hours. 10 PowerPoint lectures which are approximately 2 hours each (the student can control the pace of each slide)
- Required Course Text: approximately 10 hours of reading - Text is NOT INCLUDED in course fee. *
  - TEXT: Schwartz, M. & Andrasik, F., 3rd ed. (2003). Biofeedback-A Practitioner's Guide, Guilford, New York.
- Required Course Educational Software – approximately 5 hours
  - Biofeedback Tutor Software by Fred Shaffer (Biosource Software). NOT INCLUDED in course fee.*
- Required web reading: approximately 8 hours (links to required reading are provided in the syllabus)
- "Required" Tests: approximately 5 hours. To obtain a certificate of completion which you will submit to BCIA as proof of completing the Blueprint of Knowledge didactic training, you must submit and pass all tests. Passing grade is 65%. Retesting is permitted at no extra charge.

* Course Text and Biosource Educational Software ordering information

Dr. De Bease has no financial interest in any of the vendors providing students with course materials. You may obtain the Schwartz text and Tutor Software from various vendors including:

http://bio-medical.com/products/biofeedback-tutor-software.html
http://bio-medical.com/products/catalogsearch/result/?q=Biofeedback%3A+A+Practitioner
http://www.biofeedbackinternational.com/cgi-bin/smart.cgi?command=listitems&type=group&pos=0&group=books