InMindOut
Emotional Wellness Center, LLC

Enrollment Packet

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InMindOut Biofeedback Certificate Course Objectives

Welcome to the InMindOut Biofeedback Certificate Course,

Thank you for choosing InMindOut's certificate course for your BCIA accredited 42 Hour didactic education. We provide the most up to date research in our course to ensure sufficient knowledge for passage of the BCIA exam and to support in obtaining board certification. By the conclusion of this course, the participants will be able to:

1. Explain the uses for Biofeedback training;
2. Describe the latest empirical Biofeedback research;
3. Demonstrate biofeedback techniques necessary to pass the BCIA exam;
4. List the definitions underlying Biofeedback training and research;
5. List the pioneer researchers in biofeedback and explain their findings;
6. Describe the history and progression of empirical Biofeedback research and training;
7. Explain the responsibility and competence practitioners must have when conducting Biofeedback trainings;
8. Define one's responsibility and liability in provision of Biofeedback services;
9. Explain the difference between experimental versus experimentally-validated Biofeedback treatments and how to explain this to prospective patients;
10. Identifying contraindications to Biofeedback treatment;
11. Describe ethical principles of one's primary profession and the challenges of complying with competing ethical guidelines;
12. Demonstrate competence in all aspects of Biofeedback services provided;
13. Explain why professionals must limit the scope of practice to areas of expertise and to services permitted by the relevant practice act;
14. Define active and passive volition and its relationship to Biofeedback training;
15. Explain psychophysiological reactions to stressful situations/events;
16. Describe psychosocial mediators of stress;
17. Explain how stress, coping, and illness relate to Biofeedback and mental and physical health;
18. List a variety of psychophysiological recordings in Biofeedback training results;
19. Describe the most commonly used Biofeedback modalities;
20. Identify common locations for electrodes when performing surface EMG, respiratory, temperature, skin conductance, and heart rate Biofeedback trainings;
21. Describe different research methodologies of significant influence on Biofeedback Training results;

22. Identify target muscles, typical electrode placements, SEMG treatment protocols, and their efficacy for the following conditions: tension-type headache, TMJD , posterior neck and upper back pain, lower back pain, and pain due to poor workplace ergonomics;
23. Explain how biofeedback training utilizes feedback and feed-forward;
24. Explain the concept of self-regulation and describe specific self-regulation skill;
25. Explain Autonomic Nervous System (ANS) applications that can be applied to Biofeedback training;
26. Describe the respiratory applications that are utilized in Biofeedback training;
27. Demonstrate an array of intervention strategies that can be helpful in Biofeedback training;
28. Demonstrate effective use of biofeedback equipment and implementation of biofeedback labs;
29. Demonstrate how to use empirical evidence and assessment results to choose appropriate training methods for Biofeedback training;
30. Explain the relevance of baselines and how to establish them in Biofeedback sessions;
31. Describe how to structure Biofeedback sessions;
32. Demonstrate how to adjust program settings within Biofeedback software;
33. Explain how to utilize learning theories in Biofeedback interventions;
34. Demonstrate how to assess and create goals for Biofeedback training;
35. Describe how to track client symptom over the course of Biofeedback training sessions; and
36. Explain how to protect client privacy, rights, feelings, and sensitivities when attaching biofeedback sensors.

Again, thank you for choosing the InMindOut Biofeedback Certificate Course. We look forward to assisting you on your journey as you expand your education!

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InMindOut Biofeedback Certificate Course Phase I Syllabus

(Online)

Online Session 1: Biofeedback Introduction
Reading:
1. Validity, reliability, and generalizability in qualitative research

HW: Complete Biofeedback Introduction Quiz

Online Session 2: Human Learning
Reading:
1. Modification of Activity Level through Biofeedback and Operant Conditioning

HW: Complete Human Learning Quiz

Online Session 3: Assumptions Underlying Biofeedback
Reading:
1. Biofeedback, autogenic training, and progressive relaxation in the treatment of Raynaud's disease: a comparative study.

HW: Complete Assumptions Underlying Biofeedback Quiz

Online Session 4: Biofeedback for Mental & Physical Health Issues
Reading:
1. Psychosocial stress and psychosis. A review of the neurobiological mechanisms and the evidence for gene-stress interaction.

HW: Complete Biofeedback for Mental & Physical Health Issues Quiz

Online Session 5: Equipment and Cleaning Procedures
Reading:
1. Phobic anxiety and risk of coronary heart disease and sudden cardiac death among women.

HW: Complete Equipment and Cleaning Procedures Quiz

Online Session 6: Psychosocial Mediators of Stress
Reading:
1. Heart rate variability and skin conductance Biofeedback: A triple-blind randomized controlled study.

HW: Complete Psychosocial Mediators of Stress Quiz

Online Session 7: Biofeedback Electronic Concepts
Reading:
1. Practical anatomy and physiology: The skeletal muscle system.

HW: Complete Biofeedback Electronic Concepts Quiz

Online Session 8: Musculoskeletal Physiology and Target Muscles for EMG
Reading:
1. Biofeedback efficacy studies

HW: Complete Musculoskeletal Physiology and Target Muscles for EMG Quiz

Online Session 9: Autonomic Nervous System
Reading:
1. Biofeedback Treatment for Asthma

HW: Complete Autonomic Nervous System Quiz

Online Session 10: Efficacy, Pathophysiology, & Treatment Protocol Pt. I
Reading:
1. Evidence-based practice in Biofeedback and neurofeedback.

HW: Complete Efficacy, Pathophysiology, & Treatment Protocol Pt. I Quiz

Online Session 11: Efficacy, Pathophysiology, & Treatment Protocol Pt. II
Reading:
1. EEG Biofeedback as a treatment for substance use disorders: review, rating of efficacy and recommendations for further research

HW: Complete Efficacy, Pathophysiology, & Treatment Protocol Pt. II Quiz

Online Session 12: Intake, Treatment Planning, & Intervention Strategies

HW: Complete Intake, Treatment Planning, & Intervention Strategies Quiz

Online Session 13: The Importance of Relaxation & Biofeedback Benefits

HW: Complete The Importance of Relaxation & Biofeedback Benefits Quiz

Online Session 14: Professional Conduct

HW: Complete Professional Conduct Quiz

Online Session 15: Orientation to Biofeedback
Reading:
1. Garbage In/Garbage Out

HW: Complete Orientation to Biofeedback Quiz

Online Session 16: Respiration

HW: Complete Respiration Quiz

Online Session 17: Blood Volume Pulse & HRV Part 1

HW: Complete Blood Volume Pulse & HRV Part 1 Quiz

Online Session 18: Blood Volume Pulse & HRV Part 2

HW: Complete Blood Volume Pulse & HRV Part 2 Quiz

Online Session 19: EEG Part 1

HW: Complete EEG Part 1 Quiz

Online Session 20: EEG Part 2

HW: Complete EEG Part 2 Quiz

Online Session 21: EEG Part 3

HW: Complete EEG Part 3 Quiz

Online Session 22: EMG
Reading:
1. A guide to cleaner electrodermal activity measurements

HW: Complete EMG Quiz

Online Session 23: GSR

HW: Complete GSR Quiz

Online Session 24: Stress Test

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InMindOut Biofeedback Certificate Course Phase II Schedule

(In-Person)

Day 1 (8:30am - 6:00pm)

Introduction: Instructor and Participants
Demonstration: Temperature Lab 1
Lab 1: Temperature Lab 1
Demonstration: Breath Rate
Lab 2 Demo: Breath Rate
Lunch (1 hr 15 min)
Demonstration: Breath Rhythm
Lab 3: Breath Rhythm
Demonstration: HRV & Respiration
Lab 4: HRV & Respiration

Day 2 (8:30am - 6:00pm)

Demonstration: EEG
Lab 5: EEG
Demonstration: EMG
Lab: EMG
Lunch (1 hr 15 min)
Demonstration: GSR
Lab 7: GSR
Demonstration: Stress Test
Lab 8: Stress Test

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BCIA Biofeedback Essential Skills List

A beginning neurofeedback practitioner should be able to demonstrate mastery of the following basic skills as attested by their BCIA-approved mentor:

Blood Volume Pulse

- Explain the blood volume pulse signal and biofeedback to a client
- Explain PPG sensor attachment to a client, and obtain permission to monitor him or her
- Explain how to select a placement site and demonstrate how to attach a PPG sensor to minimize light and movement artifacts
- Perform a tracking test by asking your client to raise the monitored hand above the heart and then lower the hand
- Identify common artifacts in the raw PPG signal, especially movement, and explain how to control for them and remove them from the raw data
- Explain the major measures of heart rate variability including HR Max - HR min, pNN50, SDNN, and SDRR
- Explain why we train clients to increase power in the low frequency band of the ECG and how breathing at 5-7 breaths per minute helps them accomplish this
- Demonstrate how to instruct a client to utilize a feedback display
- Describe strategies to help clients increase their heart rate variability
- Demonstrate an HRV biofeedback training session, including record keeping, goal setting, site selection, baseline measurement, display and threshold setting, coaching, and debriefing at the end of the session
- Demonstrate how to select and assign a practice assignment based on training session results
- Evaluate and summarize client/patient progress during a training session

EMG

- Explain the EMG and biofeedback to a client
- Explain skin preparation and electrode placement to a client, and obtain permission to monitor him or her
- Identify active- and reference-electrode placements using a marking pencil for bilateral cervical paraspinal, frontalis, masseter, sternocleidomastoid, and trapezius sites
- Demonstrate skin preparation and electrode placement
- Measure electrode impedance for each active-reference electrode pair and ensure that impedance is sufficiently low and balanced

- Perform a tracking test for your placement, instructing the client to contract and then relax the monitored muscle
- Identify common artifacts in the raw EMG signal, including 50/60Hz, bridging, ECG, loose electrode, movement, and radio frequency, and explain how to control for them and remove them from the raw data
- Demonstrate how to instruct a client to utilize a feedback display
- Demonstrate a surface EMG biofeedback training session, including record keeping, goal setting, site selection, bilateral and unilateral recording, and bandpass selection, baseline measurement, display and threshold setting, coaching, and debriefing at the end of the session.
- Demonstrate how to select and assign a practice assignment based on training session results
- Evaluate and summarize client progress during training session

Heart Rate

- Explain the ECG signal and biofeedback to a client
- Explain ECG sensor attachment to a client, and obtain permission to monitor him or her
- Explain how to select a placement site and demonstrate how to attach ECG sensors to minimize movement artifact
- Demonstrate skin preparation
- Perform a tracking test by asking your client to slowly inhale and then exhale as you watch the change in heart rate
- Identify movement artifact in the raw ECG signal, and explain how to control movement and remove this artifact from the raw data
- Identify movement artifact in the raw ECG signal, and explain how to control movement and remove this artifact from the raw data
- Explain the major measures of heart rate variability, including HR Max - HR Min, pNN50, SDNN, and SDRR
- Explain why we train clients to increase power in the low frequency band of the ECG and how breathing at the 5-7 breaths per minute helps them accomplish this
- Demonstrate how to instruct a client to utilize a feedback display
- Describe strategies to help clients increase their heart rate variability
- Demonstrate an HRV biofeedback training session, including record keeping, goal setting, site selection, baseline measurement, display and threshold setting, coaching, and debriefing at the end of the session
- Demonstrate how to select and assign a practice assignment based on training session results

- Evaluate and summarize client progress during a training session

Respiration

- Explain the respiration signal, healthy breathing, and biofeedback to a client
- Explain sensor attachment to a client, and obtain permission to monitor him or her
- Explain how to select a placement site and demonstrate how to attach a respiration sensor to the chest and abdomen. SHow how to monitor the accessory muscles to measure breathing effort.
- Perform a tracking tet asking your client to a slow, deep breath
- Identify breath holding, gasping, and movement artifact in the respiration signal, and how to remove them from the raw data
- Explain how to identify clavicular breathing, excessive breathing effort, reverse breathing, and thoracic breathing
- Explain how posture and clothing can affect breathing
- Demonstrate how to find your client's resonance frequency and explain why this is important
- Demonstrate how to instruct a client to utilize a breathing pacer and the feedback display
- Discuss strategies for slowing down your client's breathing toward 5-7 breaths per minute
- Demonstrate a respiratory biofeedback training session, including record keeping, goal setting, site selection, baseline measurement, display and threshold setting, coaching, and debriefing at the end of the session
- Demonstrate how to select and assign a practice assignment based on training session results
- Evaluate and summarize client progress during a training session

Skin Conductance/Skin Potential

- Explain the SC/SP signal and biofeedback to a client
- Explain sensor attachment to a client, and obtain permission to monitor him or her
- Explain how to select a placement site and demonstrate how to attach a sensor to minimize movement artifact
- Explain how to protect the client from infection transmitted by the sensor
- Perform a tracking test by asking your client to take 3 quick breaths
- Identify common artifacts in the raw Sc/SP signal, including movement and respiration, and explain how to control for them and remove them from the raw data
- Demonstrate how to instruct a client to utilize a feedback display

- Demonstrate an electrodermal biofeedback training session, including record keeping, goal setting, site selection, baseline measurement, display and threshold setting, coaching, and debriefing at the end of the session
- Demonstrate how to select and assign a practice assignment based on training session results
- Evaluate and summarize client progress during a training session

Temperature

- Explain the temperature signal and biofeedback to a client
- Explain thermistor attachment to a client, and obtain permission to monitor him or her
- Explain how to select a placement site and demonstrate how to attach a thermistor to minimize blanketing, movement, and stem artifacts
- Perform tracking test by asking your client to blow on the thermistor bead
- Identify common artifacts in the raw temperature signal, including draft movement, and explain how to control for them and remove them from the raw data
- Demonstrate how to instruct a client to utilize a feedback display
- Describe strategies to help clients with cold hands, who warm very slowly, or who cool when they attempt to warm their hands.
- Demonstrate a temperature biofeedback training session, including record keeping, goal setting, site selection, whether to record bilaterally or unilaterally, baseline measurement, display and threshold setting, coaching, and debriefing at the end of the session
- Demonstrate how to select and assign a practice assignment based on training session results
- Evaluate and summarize client progress during a training session.