Course Description:
This course provides an introduction to physiological measurement as it relates to anxiety spectrum disorders and stress caused and stress-aggravated medical disorders. Non-clinical application of biofeedback (for optimal performance) will also be discussed. An introduction to clinical training in biofeedback and self-regulation techniques will be provided which meets the Biofeedback Certification International Alliance (BCIA) blueprint of 48 hours of didactic training and 10 hours of personal training. Students are not required to register for CP&BII (but will not then be fully eligible for certification). CP&BII will provide 50 hours of student client contact, 10 hours of case presentations and 20 hours of mentoring. The student will have to provide evidence of satisfying the human anatomy/biology requirement on their own.

Learning Objectives:
• To acquire the knowledge (1st semester of this course) and practical experience (2nd semester of this course) necessary for certification in general biofeedback.
• To provide students with knowledge of the psychophysiological mechanisms that influence, shape and impact the mind and body.
• 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 process.
• To develop an understanding of how this information is relevant in the practice of medical psychology.

Attendance:
• Attendance is expected, as much of the material covered will not be available in the class reading materials. Students who miss more than 1 class will have a reduction in grade unless there are extraordinary circumstances proven. It is the student's responsibility to obtain information on the material taught on missed classes. Attendance will be recorded for each class.

Course Requirements
• Students will be tested on their overall mastery of material presented.
• Lab participation is crucial to gaining a understanding of psychophysiological therapy
• There will be an oral or written quiz on each lecture which will be given at the beginning of each class period
• Each student will select an approved relevant book to read and conduct a class lecture/discussion on.
• Each student must keep a log of their practice and homework.

Course Text

Grading/Evaluation:
Grading will be based on class/lab participation and quizzes
Grade Breakdown: 50% class/lab participation, 25% book discussion and 25% quizzes

Incomplete Course Work:
If all work is not completed for this course, the student may be assigned an incomplete “I” . University policy is that an incomplete automatically becomes an “F” if the work is not completed within one year.
Week One  Lecture 1  Psychophysiological Paradigms
Introduction to: Course, biofeedback in general, BCIA, and AAPB
Theoretical concepts: history of biofeedback & forces leading to its emergence
Operant conditioning of physiological processes: from Skinner to Miller
Classical conditioning of physiological processes: PNI
Lab: Introduction to the CWC biofeedback lab and programs available

Week Two  Lecture 2  Stress and Dis-ease; The Respiratory System
The stress response; the relaxation response
Diaphragmatic breathing and breathing interventions
Lab: respiration

Week Three  Lecture 3  The Autonomic Nervous System
ANS, waves, photoplethysmography
Heart rate variability
Heartmath interventions
Irritable Bowel Syndrome
Lab: HRV

Week Four  Lecture 4  Electrodermal Activity
Somatic vs. cognitive anxiety
Skin Conductance
Lab: EDR, GSR, SCA

Week Five  Lecture 5  Anxiety and Biofeedback
Anxiety, PTSD and other appropriate therapies (ACT, Coherence Therapy, Somatic Experiencing)
Lab: Guided Imagery and Self-hypnosis

Week Six  Lecture 6  Vascular System
Dysfunction of the Vascular system: Raynauds, migraine, hypertension, neuropathies & diabetes
Peripheral Temperature biofeedback
Assessment of vasoconstriction patterns
Lab: Temperature training

Week Seven  Lecture 7  Electricity and Surface EMG
Dysponesis, trigger points, referred pain, fascia
Lab: sEMG 1

Week Eight  Lecture 8  sEMG continued
Ergonomics, tension headaches, neck and shoulder pain, carpal tunnel syndrome
Lab: sEMG 2

Week Nine  Lecture 9  Psychophysiological Stress Profiling
Profiling and assessment tracking
Lab: PSP

http://www.bfe.org >Library>English Protocols>Peak Performance Training with Electrodermal Biofeedback 1

Week Ten  Lecture 10  Introduction to EEG-biofeedback (Neurofeedback)
Clinical use and efficacy of EEG biofeedback in the treatment of ADD/HD, epilepsy, insomnia, anxiety,
affective disorders, MTBI, substance abuse
Lab: Neurofeedback
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<thead>
<tr>
<th>Week / Lecture</th>
<th>Title / Content</th>
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<tbody>
<tr>
<td>Week Eleven</td>
<td>Lecture 11</td>
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<td>Hemoencephalography and Entrainment</td>
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<td>ADD continued</td>
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<td>Lab: HEG, David Pal and Monroe Institute</td>
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<td>Week Twelve</td>
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<td>Pain</td>
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<td>Theories and treatment of pain; pain vs. suffering</td>
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<td>Disorders of pain and other frequently encountered issues (Blushing, hyperhidrosis, pelvic floor pain, vulvodynia, low back pain, fibromyalgia and chronic fatigue, related sleep issues)</td>
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<td>Lecture 13</td>
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<td>Catch up/review</td>
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<td>Week Fourteen</td>
<td>Lecture 14</td>
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<td>Peak Performance</td>
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<td>Week Fifteen</td>
<td>Lecture 15</td>
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<td>Student led book discussions</td>
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<td>Course Evaluation</td>
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