

RCLS 5130 Biofeedback: Principles and Practices (Online)

Specific Course Objectives:

1. Upon completion of this course, the student will demonstrate an understanding of the background and principles of biofeedback and psychophysiology as a treatment modality.
2. Upon completion of the course, the student will demonstrate knowledge and the ability to apply biofeedback assessment approaches for practice.
3. Upon completion of the course, the student will demonstrate the application of biofeedback principles and practices for a range of neurological, physiological and psychological disorders.
4. Upon completion of the course, the student will demonstrate an understanding of and ability to use basic biofeedback instrumentation for clinical service delivery.
5. Upon completion of the course, the student will demonstrate an understanding of and ability to apply basic adjunctive techniques and cognitive interventions for clinical service delivery.
6. Upon completion of the course, the student will demonstrate an understanding of and ability to apply professional ethical principles and standards of practice.
7. Upon completion of the course, the student will complete case consultation and management with the application of biofeedback and psychophysiological applications.

Course Content:

A. An Overview of Psychophysiology and Biofeedback

1. Definitions of Biofeedback
2. History of Biofeedback
3. Concepts of feedback and control in biological systems
4. Research Methodology
5. Behavioral Medicine

B. Instrumentation

1. Essential Terms and Concepts for Various Biofeedback Applications
2. Sources of Artifact
3. How to Identify and Eliminate Electrical Shock Hazards
4. Descriptions of Most Commonly Employed Biofeedback Modalities

C. Preparing for Clinical Intervention

1. Intake Decisions and Considerations
2. Psychophysiological Profiling
3. Ongoing Assessment

D. Neuromuscular Interventions: General

1. Muscle Anatomy and Physiology; antagonistic and synergistic muscle groups

2. Central Nervous System
3. Treatment of Neuromuscular Disorders

E. Neuromuscular Interventions: Specific

1. Neck (cervical) Injury
2. Low Back Injury
3. Immobilization/weakness of limb segments
4. Temporomandibular Disorders
5. Torticollis
6. Tension Headache
7. Urinary Incontinence
8. Fecal Incontinence

F. Central Nervous System Interventions: General

1. Psychological relevance of specific central nervous system structures
2. EEG Patterns and their Behavioral Correlates
3. Clinical Uses and Efficacy of EEG Biofeedback
4. Potential Effects of Prescribed and Non-prescribed Drugs on Clinical Presentation

G. Autonomic Nervous System: General

1. Structure and Function of the Autonomic Nervous System
2. Homeostasis
3. Major Stress Hormones and their Functions
4. Emotional Response Specificity
5. Law of Initial Value
6. Anatomy and Physiology of the Circulatory System
7. Specific Effects of Vasodilation and Vasoconstriction
8. Skin Temperature Training Techniques
9. Physiology and Measurement of Electrodermal Activity
10. Electrodermal Activity as an index of emotional Arousal

H. Autonomic Nervous System: Specific

1. Hypertension
2. Cardiovascular Disorders
3. Diabetes
4. Migraine
5. Raynaud's Disease
6. Respiratory Disorders

I. Biofeedback and Distress:

1. Cannon's Acute Emergency (fight or flight) Response
2. Selye's General Adaptation Syndrome
3. Other Neuroendocrine, Neuroimmunological and Neuromuscular Disorders
4. Types of Stressors that Participate in the Genesis of Psychophysiological

Disorders

5. Symptoms and Signs of Distress

J. Adjunctive Techniques and Cognitive Interventions:

1. Relaxation Techniques
2. Desensitization Techniques
3. Cognitive Interventions
4. Integrating Biofeedback and Psychotherapy
5. Nutritional Considerations Pertinent to Stress Related Disorders

K. Professional Conduct:

1. Ethical Principles
2. Standards
3. Guidelines

L. Case Consultation and Management:

Bibliography

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