

BFSA EEG/QEEG COURSE 2022

FOR NEUROFEEDBACK THERAPISTS



26 HOURS LECTURES + SELF-STUDY

Outline of basic EEG course to facilitate the understanding of Neurofeedback and ultimately QEEG.

This course is intended primarily for individuals training / practicing Neurofeedback or QEEG Assessment. Registration with an appropriate licensing Board, in a Health Professional Specialty (which enables practitioners to add NFB and QEEG as additional modalities to their practice), is a requirement. It is also open to other registered categories e.g. Psychologists, O.T,s etc. who may be interested in a basic, hands-on course.

Training in NFB and QEEG DOES NOT enable individuals to make a neurological diagnosis. This is the domain of Neurologists.

The main purpose of this course is to provide entry-level knowledge and practical competency in the domains of EEG acquisition, NFB and QEEG, addressing the overlap and differences between these disciplines, and providing a strong foundation for future specialized training of registered practitioners in these disciplines.



This course is NOT a NFB or QEEG qualification course, but it is viewed as preparatory training for the 36-hour BCIA and IQEEG Bootcamp courses. The latter still needs to be completed through accredited trainers to certify with the respective boards.

The only purpose of the course is to enhance knowledge, enabling clinicians to become better practitioners.

Enrollment with Neurophysiologist Clinical review sessions of the Raw EEG is advised as an add-on to enhance learning process. More information will be available on this opportunity soon.

SATURDAY, 7 MAY 2022

MODULE 1 (3 sessions – Full-day
Hands-on and Zoom)

TIME	TOPIC
9:00 - 11:00	SESSION 1: INTRODUCTION (2 hours) This session comprises a video introducing how EEG is used as measurement and reflection of internal physiological states and a discussion on how this signal is used in the Neurofeedback field.
11:00 - 11:15	 TEA BREAK
11:15 - 13:15	SESSION 2: RECORDING AN EEG AND AN INTRODUCTION TO SOME OF THE TERMINOLOGY This is a practical and academic session in effective use of equipment. It includes an introduction to equipment, preparation of the client and hygiene. Practical 10-20 placement demonstration with commentary on what is being done, technical set-up, safe equipment usage, and important terminology will be presented. YouTube clips, notes and PowerPoint for self-study and later reference. Interactive session with questions and discussion are welcome
13:15 - 14:00	 LUNCH
14:00 - 16:00	SESSION 3: PRACTICAL Participants have the opportunity to practice the measurement on an adult family member or friend that needs to become part of student session. Homework will include practice of the 10/20 placement and a quiz.



THURSDAY, 23 JUNE 2022

MODULE 2 Artifacts and introduction to activation procedures

TIME **TOPIC**

19:00 - 21:00 The goal of this module is to learn to recognize different kinds of artefact including environmental, electrical and from the client so that a clean EEG can be obtained. The session will include practical and didactic information.

THURSDAY, 21 JULY 2022

MODULE 3 Brain waves & frequency bands in EEG - 1: Introduction

TIME **TOPIC**

19:00 - 21:00 This module aims at introducing brainwaves from delta to gamma, frequency bands and the generators of EEG. Actual EEGs will be used to demonstrate the various brainwaves.

THURSDAY, 18 AUG 2022

MODULE 4 How is EEG generated? - Body and brain

TIME **TOPIC**

19:00 - 21:00 The aim of this section is to understand how the EEG signal is generated. Overview of the Autonomic Nervous System, Central Nervous system and various parts of the brain will be explored as a path to understanding the underpinnings of the EEG signal. The electrophysiology of neurons will be discussed as well.

SATURDAY, 17 SEPT 2022

MODULE 5 & 6

TIME **MODULE 5: Montages, Normal variants, Introduction to abnormal EEG**

14:00 - 18:15
(to include a 15 minute break) In this section the normal background for an EEG is considered and presented. Three different montage will be discussed and demonstrated. Overview to normal variants in an EEG as well as an introduction to basic abnormal EEG events will be presented and related to how they present clinically in clients.

MODULE 6: Brain waves, Frequency bands & Montages: QEEG perspective-2

The module explores an in depth study to frequency bands being used in the EEG field and Neurofeedback. How it relates then to a QEEG analysis from a practical and didactic perspective. An introduction to EEG phenotypes and how it presents clinically in clients. Use of actual EEG's to assist participants to recognize the features above as well as artefacts using their checklists. (Practical sessions)

THURSDAY, 20 OCT 2022

MODULE 7 Putting it all together!! Overview and reporting structure, Brain waves & frequency bands: integration with practicals - 3

TIME **TOPIC**

19:00 - 20:00 Revision of Frequency Bands and their relation to brain states, origin, and generators of different brain waves, expected location and morphology.

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Revision and case discussions will be structured according to a 5-step EEG reporting approach.



TIME **MODULE 8: Quantifying EEG, obtaining metrics & understanding basic quantified EEG**

13:00 - 18:15
(to include a 15
minute break)

Artifactual a raw recorded EEG & elimination of artefacts for quantification purposes. Understand Basic QEEG metrics: FFT power distribution, Z Scores Summary, 1hz bins and PAF when quantifying the information. Revisit Phenotypes from a QEEG-perspective and relate to NFB.

MODULE 9: Medication changes to EEG / QEEG. (2 hours)

Discussion of some of the common medications and recreational drugs including alcohol and nicotine and their impact on the EEG/QEEG.

MODULE 10: Ethics (1 hour)

It is vitally important to understand the clear distinction between EEG for NFB/QEEG and Clinical EEG as this underlies the principles of professional conduct.

NEUROPHYSIOLOGIST CLINICAL REVIEW SESSIONS OF THE RAW EEG:

Enrollment is advised as an add-on to enhance learning process. More information will be available on this opportunity soon.



NEUROPHYSIOLOGIST: Ms Irene Masters



EMAIL: ijohn@mweb.co.za



TIME: Monday 19.00-20.00



COST: On Application

- Learn to look at and 'get your eye in' with distinguishing artefact from EEG tracings (5 sessions)
- Different Montages, the normal EEG, Introduction to abnormal EEG tracings (5 sessions)
- Various frequency bands and recognizing brainwave categories (5 sessions)
- Can be ongoing if requested.

RECOMMENDED BOOKS/ARTICLES ETC:

1. Bester, H. Neurofeedback: The Non Invasive Alternative
2. John Demos: Understanding Neurofeedback – Book 1
3. Rowan's Primer of EEG
4. Libenson, M. Practical Approach to EEG.
5. Collura, T: Technical Foundations of Neurofeedback
6. Hammond's List of Terminology
7. Various Articles and PowerPoint Presentations to facilitate learning
8. Hammond, C. Lubar, J et al. QEEG Position Paper
9. Gunkelman, J. EEG Phenotypes
10. Collura, C. The Interconnection of EEG, Neurofeedback and QEEG.
11. Writing an EEG report for QEEG
12. YouTube Videos – Measurement of 10-20 placements

More information on this section will be available to people who register.

