

# PATHWAY TO BECOMING A QEEG practitioner: South Africa



A quantitative EEG (QEEG) is not a clinical EEG, nor is it a recognized diagnostic tool and should not be used as such. However, it has the potential to aid in the identification of functional abnormalities and assist with treatment planning for Neurofeedback. The data should be used by qualified and registered professionals, in conjunction with other tests and diagnostic information as part of a comprehensive assessment battery. All the information should furthermore be viewed within the full clinical picture of the patient. Information contained in QEEG reports is confidential and legally privileged.

**BFSA strongly recommends that all clinicians writing QEEG reports in SA have this paragraph prominently displayed in their reports.**



Becoming a QEEG practitioner follows a separate route from the BCIA certification process. The certification body is the IQEEG Board. The purpose of the Board is to certify the competence of individuals in obtaining an EEG and interpreting a QEEG.

*"Creating a Quantitative EEG involves more than learning to use sophisticated software. A major skill is knowing how to separate unrelated inputs, called artifact, from genuine brainwaves; another is understanding what information the patterns of the brainwaves themselves may hold. And, of course, the practitioner must gain the knowledge and insight to interpret the QEEG they create. Gaining this knowledge and skillset speaks clearly to the need for certification, as well as the professional value and prestige certification brings."*

## According to the IQEEG Board:

*'Professional certification is the voluntary process by which a non-governmental entity grants a time-limited recognition to an individual after verifying that predetermined and standardized criteria have been met. Because QEEG analysis is an unregulated field, certification is crucial for providing standards of care. To be viable as a professional service, standards of competence and clinical practice must be defined and measured. Since 1995, IQCB has taken on this task and offers certification programs. Through the IQCB recertification program, each certificant is held accountable to a code of ethics, obtains specified continuing education, and maintains proper credentialing appropriate for clinical practice.'*

Not all QEEG practitioners are BCIA certified, especially if they are in the medical field and are not involved in Neurofeedback. Similarly, not all BCIA practitioners need to be QEEG certified. However, Neurofeedback practitioners are strongly advised to learn to interpret and understand a QEEG report to ensure effective training.

**The following 3 options are available to Bio/Neurofeedback practitioners:**

01

Employ a registered QEEG Diplomate (QEEG-D) practitioner to perform QEEG assessments with data-based analysis and provide a report with recommendations that may guide Neurofeedback training sessions.

02

Perform your own (EEG/QEEG) assessment but send the raw data to the QEEG-D for data-based analysis and reports with recommendations that may guide and assist with Neurofeedback training. For this option, one needs to understand at least the basics of EEG and understand how to acquire a good EEG reading so it can be optimally used for QEEG analysis. It is also advisable to learn to interpret and understand a QEEG report to train your clients.

03

Perform a QEEG assessment, data-based analysis and write reports with recommendations to assist in Neurofeedback training. For this option, you need to be a certified **QEEG-D**.



# Requirements for IQEEG Certification

To practice as a QEEG practitioner in South Africa, the following are required. The final certification process is managed by the IQEEG board once the initial requirements have been met:

1. Either registration with **HPCSA** as a Health Professional **or** with IQEEG acceptable health care fields. (See Appendix 01). **This IQEEG requirement provides a scope of practice and an ethical, supervising body.**
2. Registration with the BFGA (Bio/Neurofeedback Society of South Africa).
3. Develop a strong experience-based fundamental knowledge base in Power training; Z-score and s-LORETA training and learn to integrate them with your current clinical qualification before embarking on the QEEG certification process. The IQEEG board requires candidates to present recommendations for various forms of training in the report.
4. IQEEG Board certification: The purpose of the board is to certify the competence of individuals internationally in obtaining an EEG reading and interpreting a QEEG.

**Levels of certification are based on the professional health care background of the clinician and how the different modalities will be used professionally:**

- **Diplomate Certification:** Individuals registered at HPCSA or with IQEEG acceptable health care fields.
  - **Technologist Certification:** Unlicensed individuals who do not hold a primary license. Technologists must work under the supervision of a QEEG-D in terms of USA and SA supervision requirements.
  - South African practitioners should study the IQEEG board's **ethical requirements** and visit their website for detail. In summary, registration at the HPCSA or other recognized associations such as AHPCSA, Nurses council, etc., and certification with the IQEEG board has the following implications for a practitioner: (See Appendix 4).
1. Hold a degree in an approved healthcare field at the HPCSA or with IQEEG acceptable health care fields before applying for IQEEG certification.
  2. Operate within an applicable ethical scope of practice for the specific registration category at HPCSA or with IQEEG acceptable health care fields. IQEEG certification is not a license to practice independently. It enables persons with QEEG-D certification to add a modality to their practice by way of competence. Although these persons will probably seek ongoing mentoring to improve their understanding and knowledge, they are not required to be under constant supervision. They are required to renew certification every 3 years
  3. Demonstrate professional competence as defined by the HPCSA or with IQEEG acceptable health care fields when treating medical or psychological conditions.
  4. Uphold and maintain both HPCSA/Appropriate Alternative Registration and IQEEG certification.
  5. Certificants who are not appropriately licensed or credentialed must work under appropriate supervision according to professional codes/regulations.



**IQEEG is the International Certification Body that guides and certifies practitioners in the field of EEG and QEEG– [www.qeegetcertainmentboard.org](http://www.qeegetcertainmentboard.org)**



**HPCSA or IQEEG acceptable health care fields are the regulating South African bodies that provide professional registration and guides the scope of practice for each professional category.**

Be Certified.  
Find Certified Professionals.

The QEEG Certification Board has been certifying professionals at two levels:  
Technologist & Diplomate



# IQEEG certification

The final IQEEG Certification involves 4 stages.

## STAGE 1 Applying for certification

- Once an application form has been submitted, the applicant has 2 years to write the exam.
- The didactic course can be done before you submit your application to write the exam.
- Once the application form has been submitted and the exam fee paid, the most recently updated articles and reading list will be sent to you by the IQEEG Board.
- It is best to leave writing the exam to the last stage, after the mentoring sessions and other areas have been completed, so that you have accumulated as much information as possible before writing the final exam.
- The IQEEG essential skills list (Appendix 5) is the golden standard to monitor your progress in the field and will be duly completed by your mentor during this process and submitted to the IQEEG board with your 5 case studies.

## STAGE 2 Complete an IQEEG Board approved didactic course

### IQEEG Didactic Course

- IQEEG has a separate and unique didactic course that is currently presented online.
- The following institutions offer the accredited course:



Stress Therapy Solutions  
[stsinc@stresstherapysolutions.com](mailto:stsinc@stresstherapysolutions.com)



Stens Corporation  
[www.stens-biofeedback.com](http://www.stens-biofeedback.com)



School of Neurotherapy  
[schoolofneurotherapy@gmail.com](mailto:schoolofneurotherapy@gmail.com)



Saybrook University  
[admissions@saybrook.edu](mailto:admissions@saybrook.edu)

- BFSAs are aware that, because we are not in the USA, we do not have enough access to training in understanding the raw EEG that is the basis of the QEEG. To this end, we are endeavouring to provide practical experience in this regard in South Africa. We are currently in the process of setting up practical courses for this purpose.

For more information, contact [admin@biofeedbacksa.co.za](mailto:admin@biofeedbacksa.co.za)

## STAGE 3 Connect with a mentor and complete mentorship requirements. This is an ongoing process and the following are important:

1. Contact a QEEG-D (Board certified) mentor to review 5 QEEGs with a summary report of each case. The diplomate determines whether the candidate is technically adequate and provides the necessary confirmation and referral of the candidate to the QEEG Board. During the mentoring process, the Essential skill list for QEEG will be completed and signed off by the mentor. (See Appendix 5 for a full document on skills requirement).
2. Mentors MUST be an IQEEG-Diplomate and renew their mentoring status annually. For a list of approved mentors visit the IQEEG website.
3. The IQEEG-D mentor is required to add each mentee to the list of persons they are mentoring. The mentor needs to refer the candidate and case studies to the IQEEG board once their quality of work is on the required standard.
4. The candidate needs a minimum of 10 hours with a mentor. The process is about accountability for learning, and guiding the thinking process for the clinical decision-making process.
5. There is a cost implication for being mentored. Discuss this with the mentor.
6. The 5 studies (with QEEG reports) must be on file and will be presented to the IQEEG board for review.

7. The mentee keeps records of all sessions completed and has them signed off.
8. Mentees may have more than one mentor. Each mentor signs off on the hours they have spent with the applicant.
9. You may have both international and/or South African mentors, provided that they are qualified IQEEG Board Diplomates.

## STAGE 4 Write the exam

1. **Booking an online exam** on the IQEEG website and paying the exam fee is usually the final step, but may happen any time during your 2-year certification process.
2. Take the exam. A score of 70 or above provides certification as a QEEG-T (Technologist). This individual needs to work under the supervision of a QEEG-D. With a score of 80 or above, the applicant can be certified as QEEG-D (Diplomate) **provided that the person has a professional health registration with the HPCSA or accredited alternative association.**

**All IQEEG members must be recertified every 3 years. It is important to keep abreast with ongoing learning and to keep track of CEU activities in a similar way to obtaining CPD within your profession to maintain your registration at the HPCSA.**

# APPENDICES

## APPENDIX 1 – Acceptable health care fields

International QEEG Certification Board (IQCB) Acceptable Health Care Fields: Psychology, doctors of medicine, nursing, physical therapy, occupational therapy, behavioural analyst, social work, counselling, rehabilitation, chiropractic, recreational therapy, physician's assistant, exercise physiology, speech pathology, and sports medicine. IQCB will consider requests for special review for the demonstration of equivalency to IQCB-approved health care fields. A license for independent practice in the IQCB-approved health care field is required for QEEG-Diplomate certification.

## APPENDIX 2 – Learning Material

**Some recommended webinars, videos, and books:** Ensure that you build a solid fundamental academic and technical understanding of EEG which forms the foundation of the QEEG.

Below are some recommendations from the IQEEG website:

### Books:

- Collura and Frederick: Handbook of Clinical QEEG and Neurotherapy;
- Collura, T: Technical Foundations of Neurofeedback Therapy;
- Rowan's Primer of EEG with MiniAtlas

### You Tube Clips:

Getting a Good EEG Impedance - Webinar Series

WATCH

10-20 EEG Measurement and Placement:

WATCH PART 1

WATCH PART 2

10-20 International EEG Electrode Application Video

WATCH

**Webinars:** The Artform of Artifacting & The Wisdom of Morphology

- The Artform of Artifacting: [Click to view](#)
- The Wisdom of Morphology & Montages: [Click to view](#)

### Articles

These are changed after each exam and only become available to persons wanting to be certified in the field once registration for the exam has been made.

## APPENDIX 3 – The Exam

The exam areas are set out as follow:

**10% Editing raw EEG and artifacts:** a. Physiological; b. Extra-physiological; c. Movements in the environment

**10% Drug Effects:** Understand the effects of various drugs on the EEG/QEEG data.

**25% Database Analysis:** a. Know the best subject inclusion and exclusion criteria for building a database; b. Understand fundamental statistical consideration within databases; c. Know t-tests, alpha and P levels, correlational relationships. Understand z-score measures

**30% Clinical and Cognitive Aspects:** a. Understand developmental changes in the EEG; b. Understand the origins of the EEG; c. Know what EEG signatures should be referred out to other professionals; d. Be knowledgeable about Brodmann area functions and network connections; e. Understand LORETA interpretation and training; f. Be knowledgeable about general cognitive and clinical changes that take effect after neurofeedback training based upon publications; g. Understand how clinical presentation may affect the EEG.

**25% Montages and Spectral and Topographic Aspects of the EEG:** a. Have a working knowledge of the montages, transforms and power displays along with the specific perspectives they can provide a reader of QEEG output; b. Understand what defines the various montages and the circumstances of their use; c. Understand sources in the brain from which various frequency bands normally emanate; d. Understand phase and coherence, how they relate and what they can mean in the interpretation of the QEEG.

## APPENDIX 4 – Ethics

[Click to view](#)

## APPENDIX 5 – Skills list

[Click to view](#)

