



Mind, Science & My Health (MSMH) is a private enterprise established by Michelle Aniftos *BCN QEEGD* to advance the scientific study and professional practice of EEG-guided assessment and intervention in mental health, with accountability to relevant authorities and the field of applied neuroscience.



[IQCB](#) accredited course

QEEG for Clinical Practice: 40-hour Didactic Education (self-paced) + optional 10-hour Practical Skills Mentoring



The Course Presenter, Michelle Aniftos is a Clinical Psychologist, Certified in Neurofeedback (BCIA) and a Diplomate of the QEEG Board International (IQCB). She is the founder, Director and Senior Clinician of Mind, Science & My Health with three locations in southern Queensland. Michelle is accredited by the Australian Health Practitioner Regulation Agency as a Supervisor of Provisional, Registered and Clinical Psychologists and is an approved trainer and mentor for Neurofeedback and QEEG certification. Michelle is past Convener of the Australian Neurofeedback & Psychology Interest Group; past President and Fellow of the Applied Neuroscience Society of Australasia; and past Chair and Fellow of the Biofeedback Certification International Alliance - Australia.

The MSMH QEEG for Clinical Practice course aims to provide entry level knowledge and skills training to enable delegates to independently record QEEG data for analysis (with access to appropriate technology being the responsibility of course participants). It is expected that successful candidates will be able to demonstrate foundation-level ability to interpret QEEG analyses, and to prepare case reports, under supervision of a QEEG-mentor. The *MSMH QEEG 40-hour Didactic Course* is accredited to align with the IQCB 2023 Blueprint of Knowledge for Certification in QEEG and includes nine **Core Modules**:

- | | |
|--|---|
| I. History of QEEG (1 hr) | VI. Psychopharmacology (2 hrs) |
| II. Neuroscience (8 hrs) | VII. Research Design & Practice (2 hrs) |
| III. Instrumentation & Electronics (4 hrs) | VIII. Clinical Practice and Forensics (4 hrs) |
| IV. Principles of the EEG (8 hrs) | IX. Ethical & Professional Conduct (2 hrs) |
| V. General Knowledge of QEEG (9 hrs) | |

Complete Modules 1-9 to attain an **IQCB-accredited QEEG 40-hr Didactic Certificate**. Register by selecting option #1 on our Registration Form on p4 of this document. Each module will include:

- a study guide (AAA_READ FIRST_Module #)
- a range of optional reading materials to support your learning
- a [Compulsory Review Task](#) to ensure your engagement with the course content
- [Module Review Questions](#) that may guide content review and exam preparation
- [Module Evaluation](#) for reflection, and feedback to improve course reviews.

Optional Inclusion:

Module Webinars introduce each module and the associated Review Tasks. Prerecorded versions are included in your course materials. Live webinars are available for paid registrants completing the 40-hour didactic – see dates listed on page 3. [RSVP](#) is required to attend.

Optional Extras:

1. QEEG Group Supervision is available for those who benefit from collaborative learning.
2. Complete Module 10 to receive a **QEEG for Clinical Practice Certificate** providing 10 hours of IQCB-accredited mentoring and review of your submission of QEEG case studies.

MSMH QEEG Course for Clinical Practice: Study Modules

Q1: History & Development of QEEG

(1 hr self-guided reading, webinar & review task)

- a. Basic knowledge of the history of QEEG (quantitative electrophysiology)

Q2: Neuroscience: Neuroanatomy Knowledge

(8hrs self-guided reading, webinar & review task)

- a. Cortical / sub-cortical structures, macro & microanatomy
- b. Cerebellum
- c. Thalamus
- d. Basal ganglia
- e. Sensory pathways
- f. Limbic structures and pathways
- g. Autonomic nervous system
- h. Major networks
- i. Clinical correlations

Q3. Instrumentation, Electronics & Technique

(4hrs self-guided reading, webinar & review task)

- a. Topography of cortical and subcortical electric fields
- b. Caps/Electrodes, 10/20 System,
- c. Instrumentation, Software options (e.g., Intro WinEEG)
- d. Reviewing montages (bipolar and referential)
- e. Aseptic and Electrical Safety

Q4. Basic Technical Principles of the EEG

(8hrs self-guided reading, webinar & review task)

- a. Basic knowledge of the neurophysiology of EEG
- b. Pre-assessment Preparations (clinical & technological)
- c. Signal Acquisition, identifying and managing artifacts
- d. Distinctive Foreground Patterns
- e. Clinically significant EEG waveforms in Adults & Children (abnormal vs adaptive outliers)
- f. Physiological Basis of Abnormal EEG
- g. When to Refer to a Neurologist

Q5. General Knowledge of QEEG

(9hrs self-guided reading, webinar & review task)

- a. Visual examination of EEG traces to identify the time and location of artifact and pathology
- b. Ability to select an appropriate sample of EEG
- c. Understand test-retest and split-half reliability
- d. Understanding, generating, and interpreting power spectrum, surface maps & source localization
- e. Understand, generate & interpret QEEG norms
- f. Generate paediatric & adult QEEG Assessment Reports
- g. Filtering methods and subjective characteristics of frequency bands

Q6. Psychopharmacology

(2hrs self-guided reading, webinar & review task)

- a. Basic Cell Physiology
- b. Washout Periods
- c. Guidelines for Recording & Evaluating Pharmaco-EEG

Q7. Research Design & Practice

(2hrs self-guided reading, webinar & review task)

- a. Basic vs. Clinical Research
- b. Exploratory research vs. hypothesis testing
- c. Experimental Design
- d. Statistical Analyses
- e. Classification and Pattern Recognition
- f. Validation
- g. Meta-Analysis
- h. Reporting results and Publication Standards
- i. Statistical analysis

Q8: Ethics & Professional Conduct

(2hrs self-guided reading, webinar & review task)

- a. responsibilities and liability in the provision of services
- b. demonstrated competence in all aspects of the service provided
- c. limiting scope of practice to professional training and qualifications
- d. advertising/marketing of services and public statements
- e. continuing education and training
- f. patients' rights, privacy, confidentiality, and privileged communication
- g. informed consent to assessment and treatment
- h. accepting clients, abandonment, and appropriate referral
- i. supervision/professional relationship and dual relationships
- j. conflicts of interest and exploitation of patients
- k. consultation, referral, and relationships with other professionals
- l. medical and medication monitoring

Q9: Clinical Practice and Forensics

(4hrs self-guided reading, webinar & review task)

- a. Limits of interpreting QEEG regarding choice of reference databases; recognizing statistical probability v clinical probability
- b. Differentiate "fact/treating" witness vs "expert" witness in depositions
- c. Daubert vs Frye standards, application for use / interpretation of QEEG
- d. Emphasis of correlating QEEG with other clinical diagnostic evidence
- e. Appropriateness of a QEEG referral
- f. Patient conditions related to QEEG evaluation
- g. History and prior clinical and laboratory reports review

N.B.:

Modules 1 – 9, describe competency domains of IQCB-accredited 40-hour courses for; assessable by the IQCB Exam.

Q10. 10 hours MSMH Q-Mentoring Program

To register, select option #2 on the Registration form on p4.

Q10 is an optional post-didactic course of supervision supporting delegates to demonstrate Essential Skills competency for recording, analysis and reporting of 5 case studies.

This module may be completed as a standalone course for those who have already completed their 40-hour Didactic Training for QEEG.

Key Dates 2024

The MSMH QEEG Didactic Course is designed to be **self-paced**, however the following schedule of **Live Webinars** may support course engagement for those who appreciate structure and deadlines.

NB: Webinar participants must be paid registrants completing the MSMH QEEG Didactic Course; and must [RSVP](#) their attendance for online webinar attendance (*no RSVPs = no webinar offering*).

Module Webinars - optional <i>for 40-hr Didactic participants</i> <i>(option #1 on Registration Form)</i>	Tuesdays, AEST 4 – 6pm Brisbane	Compulsory Review Tasks Recommended Submission Dates
Introduction to Modules 1, 7 & 8: <i>History, Research & Ethics</i>	30/04/2024	17/05/2024
Module 2: <i>Neuroscience</i>	21/05/2024	07/06/2024
Module 3: <i>Instrumentation</i>	11/06/2024	28/06/2024
Module 4: EEG	02/07/2024	19/07/2024
Module 5: QEEG	23/07/2024	09/08/2024
Module 6: <i>Psychopharmacology</i>	13/08/2024	30/08/2024
Module 9: <i>Clinical & Forensic</i>	03/09/2024	27/09/2024
<p>QEEG Group Mentoring is available Thursdays 2nd May to 5th September 2024, 5-6pm Brisbane time. Please register by completing and submitting option #3 on p4 Registration Form.</p>		

Your enquiries are welcome. Please contact Michelle Aniftos.

Phone: 0423548464, or

Email: michelle@msmh.com.au

MSMH QEEG COURSES REGISTRATION FORM

1. Personal Details

Surname:	Given names:
Postal address:	
Email:	Mobile:

2. Academic Qualifications

Please indicate your profession and/or demonstrate suitability to participate in this post-graduate professional training in applied neuroscience.

I have completed higher education studies in: _____

I have Professional Registration in the field of: _____

I am not eligible for independent practice as a health-carer however, I am working under the supervision of a registered practitioner and/or a QEEG or BCIA approved mentor _____

3. Registration Options

Please register _____ (First and LAST name) as a participant in the MSMH QEEG programs selected below.

1. MSMH QEEG Didactic Modules 1-9 Package, \$2400 AUD (includes GST)

I understand that Modules 1-9 of the course are delivered as an online, self-guided learning materials including readings, recorded tutorials and compulsory review tasks with personalised feedback from a QEEG Mentor.

OR

In lieu of the full course, I am applying for individual Modules to meet alternative PD goals, please select from below and sum the module values to record the **Total Value = \$_____AUD (inc GST)**

- | | |
|---|--|
| <input type="checkbox"/> Module 1: History of QEEG, \$75 | <input type="checkbox"/> Module 6: Psychopharmacology, \$150 |
| <input type="checkbox"/> Module 2: Neuroscience, \$450 | <input type="checkbox"/> Module 7: Research Design & Practice, \$150 |
| <input type="checkbox"/> Module 3: Instrumentation & Electronics, \$250 | <input type="checkbox"/> Module 8: Clinical Practice & Forensics, \$250 |
| <input type="checkbox"/> Module 4: Principles of the EEG, \$450 | <input type="checkbox"/> Module 9: Ethical & Professional Conduct, \$150 |
| <input type="checkbox"/> Module 5: General Knowledge of QEEG, \$475 | |

2. 10 hrs Online MSMH Q-Mentoring Program with 10 hours supervision, \$1995 AUD (inc GST)

I understand that to complete Module 10, I require face-to-face mentoring online or attendance at a 2-day group workshop when these become available. (Please express your interest...)

3. QEEG Fortnightly Group Mentoring, \$75/hr (incl GST) or \$600/10-hour pack.

Optional extra for those who benefit from more regular mentoring and peer learning opportunities. Currently scheduled as Thursdays 2nd May to 5th September 2024, 5-6pm Brisbane time.

Please submit your Registration Form to Mind, Science & My Health, michelle@msmh.com.au

Your Tax Invoice/Receipt will be dispatched following receipt and approval of your registration.

About the International QEEG Certification Board & QEEG Certification

The **International QEEG Certification Board (IQCB)** was established to certify the competence of individuals in obtaining and interpreting a Quantitative Electro-encephalograph (QEEG). Certification candidates must:

- 1] meet minimum qualifications by having a degree in an acceptable health care field (required for Diplomates); & be credentialed for practice in a health care field (OR work under supervision for Technicians)
- 2] apply for online access to:
 - a. IQCB at <https://qeeqcertificationboard.org/account/log-in/> (this is where you will be given access to the latest exam reading list) and;
 - b. Certemy to track your certification progress <https://iqcb.certemy.com/entry/self-enrollments/QEEG-Candidate/595d6334-756e-4d28-9ded-9a0ef477af71> and **make payments**.
 - c. Go to the **[IQCB Examination step and pay for the exam](#)**, and commit to the IQCB **[Professional Standards and Ethical Principles](#)** by endorsement online.

After completing your application and paying the application fee, you will be assigned a credential path (QEEG-Diplomate or QEEG-Technician); and then will receive an email from the IQCB Administrator to confirm your readiness to [register for the exam](#). *Although it is recommended that candidates complete their didactic training and mentoring program prior to the exam, you may **register for the exam** and complete it at any stage of your candidature (i.e., must have completed step 2 above to access exam).*

3] complete a 40-hour IQCB-accredited, didactic training program including practical skills training for EEG recording, artifacting, quantitative analysis and interpretation.

4] recruit an IQCB Diplomate to complete a minimum 10 hours of mentoring and 5 QEEG case studies with a summary report of each, written by the applicant. The Diplomate reviews the case reports to ensure they are technically adequate and provides confirmation and referral of the candidate to the QEEG Board.

5] complete and pass an IQCB examination with a score of 70% or higher, addressing the following areas (*percent of questions, to be examined from each module, is indicated in brackets.*):

- | | |
|---------------------------|---|
| I. History of QEEG (2.5%) | VI. Psychopharmacology (5%) |
| II. Neuroscience (20%) | VII. Research Design & Practice (5%) |
| III. Technical (10%) | VIII. Clinical Practice and Forensics (10%) |
| IV. EEG (20%) | IX. Ethical & Professional Conduct (5%) |
| V. QEEG (22.5%) | |

N.B.: Please visit the IQCB website to review the current details of the certification process -

<https://qeeqcertificationboard.org/certification-process/>

QEEG Certification Required Reading (NB: full list provided by IQCB to registered applicants)

- Collura, T.F. *Technical Foundations of Neurofeedback*. Routledge, 2013. Chapters 1-6
- Garey, L.J. (1994). [Brodmann's Localisation in the Cerebral Cortex: The Principles of Comparative Localization in the Cerebral Cortex Based on Cytoarchitectonics](#). A translation of the 1909 original. Springer, London.
- Rowan AJ. & Tolunsky E. (2003) *Primer of EEG: with a mini-atlas*, Philadelphia; [Oxford]: Butterworth-Heinemann.
- Thatcher, R. (2012). [Handbook of Quantitative Electroencephalography and EEG Biofeedback: Scientific Foundations and Practical Applications](#). AniPublishing, Inc. Chapters 1, 2, 4, 5 (no fee to QEEGCB candidates).

Recommended

- Arns, M. and E. Gordon (2014). "[Quantitative EEG \(QEEG\) in psychiatry: diagnostic or prognostic use?](#)" *Clinical Neurophysiology*, **125**(8): 1504-1506.
- Hammond, D.C. (2011). "[What is Neurofeedback: An Update](#)." *Journal of Neurotherapy* **15**(4): 305-336.

NB: Finalising your IQCB certification

Delegates pursuing IQCB Certification in QEEG must:

- successfully complete an accredited 40-hour Didactic Training in QEEG (*MSMH Modules 1-9*)
- complete a minimum 10 hours mentoring to demonstrate [Essential Skills](#) (*MSMH Module 10*)
- successfully complete the IQCB Board Exam
- present 5 completed case reports to your QEEG-DL Mentor

QEEG ESSENTIAL SKILLS Training Guide

1. Client-Therapist Interface: client orientation & engagement in QEEG

- i. what is a QEEG and when is a QEEG recommended
- ii. why might the QEEG findings be useful to the client, therapist, or others client care providers
- iii. how is the QEEG conducted: intake, recording, analysis, reporting & feedback
- iv. explain client's role and responsibilities in the QEEG process
- v. obtain written client permission for QEEG using a thorough Informed Consent form
- vi. document a biopsychosocial client history and presentation, hypothesis, and management plan

2. Prepare to Perform a QEEG Assessment

a. Technician-Instrument Interface

- i. make correct hardware connections and start hardware
- ii. make correct electrode connections to the hardware
- iii. accurately select, install, and run QEEG software
- iv. identify components, applications, and limitations of selected software package
- v. troubleshoot common equipment failures according to manufacturer's recommendations.

b. Client-Instrument Interface

- i. purpose and steps involved in skin preparation, electrode attachment, and recording conditions
- ii. assure client about safety of "sensors"/electrodes
- iii. demonstrate occupational hygiene and aseptic techniques
- iv. prepare scalp and ears to attach an electrode cap and ear sensors
- v. measure, name and locate, on the scalp, each site of the International 10-20 System
- vi. check, improve and stabilise low impedances

3. Recording the QEEG Maximising Client Safety and Data Quality: the client-technician-instrument triad

- i. provide initial orientation and instructions to client
- ii. perform all steps to collect a QEEG recording (eyes-open and eyes-closed *and task if time permits*)
- iii. monitor recording and provide coaching and feedback to client (quality control & client safety) e.g., *relationship between client activity and on-screen information, especially artifacts*
- iv. save session data per equipment & clinical data management guidelines, e.g., *save deidentified raw file to clinic database, save a copy to specific client file, create a client-file copy for editing.*
- v. maintain rapport by soft-review of raw observations (e.g., *great work; I noticed a variety of activity ... times when you were settled and sometimes not. Describe your experience for me? Any questions?*), offer reassurance re next steps, end the session.

4. Artifacting and Analysis of the QEEG (montages, spectra & topographies)

- i. inspect the raw & describe dominant activity
- ii. identify and remove (or control for) sources of common artifacts in the raw EEG signal
- iii. conduct analyses e.g., absolute power, relative power, phase, coherence, z-score comparisons
- iv. summarise analysis in relation to the reason for referral
- v. identify activity that may warrant a neurological consult (e.g., epileptiform, etc)

5. Preparing a Report of QEEG Assessment Findings & Implications

- i. include client history and intake presentation, preliminary hypothesis, and current assessment findings (raw and computed, qualitative and quantitative) in formulation and report preparation
- ii. recommend intervention/management including an initial neurofeedback protocol
- iii. provide feedback to client and explain rationale for findings and recommendations

RECERTIFICATION

The requirements for recertification are 30 completed hours of CEs (2 of which must be in ethics) and the recertification fee of \$300, every 3 years. CEs are attainable through the following:

- 1. Attending a minimum of 15 hrs** of trainings, plenaries and other discussions that **specifically pertain to QEEG**, including IQCB accredited didactic coursework; remaining hours can be earned in fields of application such as EEG, neurotherapy, psychophysiology, brain anatomy. (1 CE per hour).
- 2. Presenting a workshop, plenary or other discussion** that pertains to EEG &/or QEEG (1 CE /hr)
- 3. Publishing an article** pertaining to QEEG in a peer-reviewed journal. (15 CEs)
- 4. Submit a question for the IQCB certification exam** supported by two independent documents. (1 CE)

The CEs detailed below qualify as QEEG-specific CEs for your IQCB recertification:

5. ARTICLES: Read approved online articles and answer a short questionnaire. Earn 1 CE for each article. NOTE: These articles are located under the **Resource** section of the IQCB website below the Reading List with Links and can only be accessed when you are logged in to our website.

A maximum of 5 articles/year can be earned; we will be adding new articles each year. Upload the certificate issued after successfully completing the questionnaire to your Certemy profile as recertification CEs.

6. QEEG MENTORING: Qualified **Diplomates** that provide mentoring to QEEG candidates can **earn 1 CE for each mentoring hour**. Simply upload a copy of the ***Mentor Verification Form** completed for your mentee to your Certemy profile as recertification CEs.

7. PEER-PEER CONSULTING: Diplomates that continue to advise their mentees and colleagues regarding QEEG applications can **earn 1 CE for each hour** toward their recertification. And, the mentees/colleagues also **earn 1 CE for each hour** toward their QEEG-T/D recertification. Log in to the IQCB website and complete the [Contact Hour Verification Form](#) and upload to your Certemy profile under QEEG-specific CEs. **NOTE:** This form is located under the **Resource** section of the IQCB website below the Reading List with Links and can only be accessed when you are logged in to our website.

Diplomates may teach accredited didactic coursework for certification. The course must be taught at least 75% by a Diplomate and follow the timed blueprint requirements found on the IQCB website. Course registration fees are determined by the instructor.