



SCIENTIFIC TRAINER · TÜV PERSON CERTIFICATION OPTIONAL

Module Handbook

Twelve live evenings, the final day and clearly separate add-ons.

From knowledge through understanding and skill to performance.



HOW THE PROGRAMME IS BUILT

Two phases, one final project.

The curriculum forms one continuous arc from knowledge to presentation. The **Foundations phase** lays the scientific groundwork, the **Transfer phase** carries it into your own training or L&D project. On the **final day** you present your transfer concept, reviewed for professional soundness. The exam preparation day, the TÜV person certification and the professional development seminars are clearly separate from this and can be added voluntarily.

Each learning unit is described by its goal, core topics and methods. The sequence follows didactic fit: teaching activities and assessments are aligned with the learning objectives, audited against our own constructive alignment standard.

What sets it apart: the methods are applied, not only discussed. Participants research with AI, check sources and experience embodiment, for example by modelling brain structures in potter's clay. Immersive formats and VR are explored in practice in the separately bookable professional development seminar "Future Learning".

Science as a method, not as decoration

A study detail that dresses up a training is not the point. The point is scientific thinking as a school of critical thinking and of handling complexity. People need exactly this competence wherever things stop being trivial.



Foundations phase · Units 1–6

UNIT 01 Toolkit for translating science into practice

GOAL Tell scientifically grounded approaches from pseudoscientific ones and build your own arguments on evidence.

TOPICS Transdisciplinarity & the biopsychosocial model · Falsifiability, levels of evidence, peer review · Exposing trainer myths and “neuro-bullshit” · Bloom’s taxonomy & higher order thinking skills · Critical thinking and science-based argument

Interactive case analyses, myth check of real claims, reflection groups.

UNIT 02 Toolkit for artificial intelligence & research

GOAL Use AI tools in a methodically sound way for scientific research and validate the results critically.

TOPICS AI tools (ChatGPT, Claude, Perplexity) & research tools (Consensus, SciSpace) · Prompting techniques & deep research · Recognising hallucinations, validating sources · Data protection & ethics · Checking claims, analysing training approaches

Practical research exercises, tool comparisons, AI-supported project guidance.

UNIT 03 Neuroplasticity: the physiology of learning & development

GOAL Understand neurobiological learning processes and develop transferable strategies for getting up to speed quickly in complex fields.

TOPICS Neuroplasticity as the basis of learning · Neural signal transmission and transduction · Multimodal learning · Neurotransmitters, neuromodulators, neuropeptides · Synaptogenesis, neurogenesis, long-term potentiation · Genetics/epigenetics of behaviour

Visualisation with augmented reality, modelling cellular structures in plasticine, documenting your own learning strategies.

UNIT 04 Neuroanatomy: experiential learning with potter's clay

GOAL Know the basic brain structures and their functions and interpret them for training and coaching contexts.

TOPICS From brainstem to cerebrum · Thalamus, hypothalamus, basal ganglia, limbic system · Functional areas: language, motor function, sensation, emotion · Resting-state, attention and executive networks · Transfer to practice

Modelling in potter's clay as embodiment, a physical counterweight to digital learning with AI and VR; 3D anatomy software; reflection on handling specialist terminology.

UNIT 05 Neuropsychology: the biology of perceiving, thinking and acting

GOAL Understand the neuropsychological foundations of perception, cognition and emotion and carry them over into interventions.

TOPICS Perception & multisensory integration · Language, thinking, communication · Attention, memory, executive functions · Emotion & stress: limbic-prefrontal dynamics · Heuristics and dual-system models · Neurodiversity as a resource

Case analyses from training and coaching, discussion of studies, reflection on your own cognitive strategies.

UNIT 06 Neurosystemics: the big picture of the bio-psycho-social system

GOAL Look at biological, psychological and social system levels together and apply them to complex organisational processes.

TOPICS Engel's biopsychosocial model · Systems theory (Bertalanffy), cybernetics (Wiener, von Foerster) · Autopoiesis & constructivism (Maturana/Varela) · Social systems (Luhmann) · Synergetics (Haken), person-centred systems theory (Kriz)

Systemic tools for analysis and reflection, case analyses from several perspectives.





Transfer phase · Science to Business

UNIT 07 Neuroscience-informed learning design and future skills

GOAL Connect principles of neuroscience-informed learning design with future-skills research and design evidence-based formats for face-to-face, e-learning and extended reality.

TOPICS 12 neurodidactic principles for adult education · Future-skills reports (WEF, UNESCO, OECD) · Future skills × future learning · Paradigm shift in L&D: happy sheets, skill disruption, re-/upskilling, learning in the moment of need

Developing neuroscience-informed training sequences, peer supervision, discussion of empirical learning needs.

UNIT 08 Artificial intelligence in L&D

GOAL Use AI confidently and methodically in your own work and translate AI competence into a learning objective of your programmes.

TOPICS AI-supported design, research and material development · Limits and failure patterns of generative models · Data protection, copyright and the EU AI Act in practice · AI competence as a future skill: curricula for the organisation · What AI replaces in the learning process, and what it does not

Work on your own use cases, tool comparisons, peer review of the results.

UNIT 09 Evaluating impact and ROI

GOAL Measure training effects with validated instruments and demonstrate impact in a way that stands up to scrutiny.

TOPICS Impact models from Kirkpatrick to transfer-oriented evaluation · Hypotheses and study design for interventions · Selecting and using validated instruments · Calculating and reporting effect sizes · Justifying return on investment without overstretching the figures

Designing your own evaluation, analysing real data sets, critical reading of impact reports.

UNIT 10 From neuropsychotherapy to evidence-based coaching

GOAL Understand Grawe's neuropsychotherapy as a theory of effectiveness and carry its central principles over into coaching.

TOPICS Empirical research on effectiveness from psychotherapy · Consistency theory & basic needs (attachment, control, pleasure, self-esteem) · Need regulation & resilience · Recognising and resolving inconsistency tensions · Pre/post evaluation with validated instruments

Analysing coaching situations by their principles of effect, developing evidence-based interventions.

UNIT 11 Behavioural economics and neuroleadership

GOAL Understand findings from behavioural economics and neuroscience on decision-making and leadership and carry them over into training, consulting and leadership.

TOPICS Heuristics & cognitive biases (Kahneman, Tversky) · Nudging and choice architecture (Thaler) · Reward and threat systems in the brain · SCARF model and neuroleadership (Rock) · Status, fairness and motivation in organisations

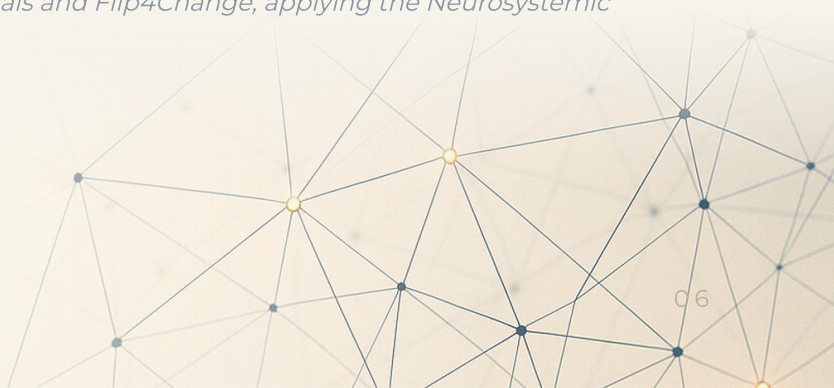
Analysing real decision-making and leadership situations, developing interventions grounded in behavioural economics.

UNIT 12 Neurosystemic support for change & transformation

GOAL Understand the neurosystemic foundations of change processes and use them in organisations on the basis of evidence.

TOPICS Integrating neuroscience, psychology and systems theory · The Core Essentials model as a framework · The Flip4Change process approach · Neurosystemic Panorama® · Grawe's consistency theory in organisations · Roots in systems theory (Luhmann, Maturana/Varela, Haken)

Developing change processes with Core Essentials and Flip4Change, applying the Neurosystemic Panorama®.





Final day & TÜV · Unit 13 is included · the exam preparation day belongs to the optional TÜV package

UNIT 13 Presentation & pitch of the transfer concepts

GOAL Present your own concept, its benefit, its professional basis and the evaluation plan convincingly and with your audience in mind.

TOPICS Presentation in pitch-deck logic with 4MAT framing (Why, What, How to, What if) · Problem, desired change, professional core, training design and evaluation plan · Handling critical questions

Presenting your own transfer concept on the final day, structured feedback from peers and experts.

TÜV Science Fitness: exam preparation for the TÜV written exam

GOAL Master the professional foundations for a scientifically grounded transfer into practice and be able to answer questions on them.

TOPICS Deepening and consolidating the core knowledge with exam questions on philosophy of science, neurophysiology, neuroanatomy, neuropsychology and systems theory · Frequent critical participant questions on fMRI images and statistics

Answering multiple-choice questions together, clarifying the reasons behind right and wrong answers.

Professional development seminars · Bookable individually · reduced price for participants

PLUS Future Learning: AI & immersive learning in training & coaching

GOAL Use AI and immersive EdTech (virtual and augmented reality) purposefully to design and deliver training and coaching formats.

TOPICS AI in training design (Bloom, Kolb, McCarthy) · AI for creating materials · AI as a training partner: facilitation, feedback, transfer · Avoiding cognitive debt · AI as an amplifier of intelligence · Experiential business formats with VR · The convergence of AI and VR

Designing concrete training modules with AI, developing AI-based scenarios, experiencing immersive formats.

PLUS Validated questionnaire instruments & statistics for educators

GOAL Measure the impact of training and coaching with validated instruments, analyse it statistically, and calculate and report effect sizes correctly.

TOPICS Forming hypotheses on training/coaching effects · Designing a study (e.g. pre-post) · Selecting validated psychometric instruments · Quality criteria (reliability, validity, objectivity) · Descriptive statistics, hypothesis tests, calculating and reporting effect sizes

Practical exercises with real training data, statistical analysis with the software provided, interpretation and reporting.



QUALITY OF THE CONTENT

Reviewed, and continuously developed.

The content of this curriculum meets the same standard the programme teaches. It is audited scientifically with the BRAIN-HR EdTech tools and continuously updated within the network.

EVIDENCE-CHECK

Content checked against evidence

Every method taught is checked against the scientific literature with the Evidence Check instead of relying on tradition.

CONSTRUCTIVE ALIGNMENT

Didactically aligned

With the Nudging Bloom software, learning objectives, methods and assessment are precisely aligned, up to the highest level of competence.

TOOL-SUPPORTED

Scalable and consistent

The audit is tool-supported, traceable and applicable to every learning unit.

NET OF BRAINS

Developed further in the network

The think tank of science, business and professional education keeps the content in line with current research.



SUPPORT BEYOND THE WORKSHOPS

So that the transfer succeeds.

The learning units do not stand alone. Throughout the programme, continuous guidance supports your own transfer project.

AS NEEDED

Implementation office hour

Open hands-on support with design, research, methods and preparation for the oral examination, bookable at any time via a Calendly link.

REDUCED PRICE

Professional development programme

Access to an extensive programme of professional development seminars on AI, medicine, business administration and more, at a reduced price for Scientific Trainers.

In every evening workshop a short status check secures progress on the transfer project. That way the concept grows step by step and does not have to be produced in one big effort at the end.





**Science is the blueprint for future
learning.**

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