

LEARNING PROGRAMME

Lessons from Neuroscience – What Can Neuroscience Teach Us About Learning?

10-DAY COURSE

50 learning hours | Course programme

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Introduction and Description

This advanced professional development course offers a comprehensive and interdisciplinary examination of contemporary neuroscience and its pedagogical implications, enabling teachers to critically interpret scientific insights and translate them into evidence-informed educational practices. The programme situates current neuroscientific knowledge within broader frameworks of cognitive psychology, learning sciences, and educational theory, emphasising the dynamic and plastic nature of the human brain and its implications for teaching, learning and classroom design.

Participants explore the neurological underpinnings of attention, perception, working and long-term memory, executive functioning, emotional regulation and motivation, with particular focus on how these processes interact during learning. The course foregrounds the significance of affective, social and environmental factors, including stress, belonging, curiosity and intrinsic motivation, and examines how these elements shape learners' cognitive readiness and engagement. Drawing on the Brain-Targeted Teaching Model, theories of social and emotional learning, and principles of transformative and experiential learning, participants investigate how instructional choices can strengthen neural pathways, deepen conceptual understanding and support holistic learner development.

A strong emphasis is placed on the practical application of neuroscience to everyday classroom realities. Participants engage with movement-based strategies, arts-integrated practices, cognitive games and inquiry-driven approaches that have been shown to enhance neurocognitive activation, sustain attention, and promote metacognition. Through structured workshops, collaborative design tasks, classroom simulations and guided reflection, teachers analyse how learning environments can be optimised to reduce cognitive load, promote emotional safety, foster creativity and strengthen memory consolidation.

The course also critically addresses the responsible use of neuroscience in education, including the distinction between robust scientific findings and widespread neuromyths. Participants evaluate empirical research, consider ethical implications, and develop the capacity to make informed, critical decisions when integrating scientific insights into pedagogical practice.

Throughout the programme, participants receive individualised support in designing, implementing and refining brain-compatible instructional strategies tailored to their own teaching contexts. The course culminates in the creation and presentation of a micro-project demonstrating the participant's ability to synthesise neuroscientific principles and apply them to coherent, context-specific educational design. By the end of the training, teachers emerge with a deep conceptual understanding of learning processes and a versatile repertoire of pedagogical approaches grounded in the latest advancements in neuroscience.

Methodology and Assessment

The course uses an experiential, brain-compatible methodology combining expert input with hands-on workshops, collaborative tasks, movement-based activities, arts integration and inquiry-led learning. Participants engage in modelling, guided experimentation, peer observation and reflective dialogue to explore how neuroscientific principles translate into classroom practice. Continuous formative assessment includes observation, reflective journals, peer feedback and self-evaluation tools. The final micro-project presentation demonstrates each participant's ability to interpret neuroscientific insights and integrate them into coherent pedagogical designs.

Learning Objectives

By the end of the course, participants will be able to:

1. **Explain foundational neuroscientific concepts** such as neuroplasticity, attention, memory processes, emotional regulation and cognitive load, and relate them to classroom learning.

2. **Apply brain-targeted teaching principles** to structure lessons that support focus, comprehension, retention and transfer of knowledge.

3. **Use movement-, game-, and arts-based strategies** to activate cognitive functions, enhance motivation and strengthen classroom engagement.

4. **Integrate SEL-informed routines** to build positive learning climates, support emotional well-being and increase learners' readiness to learn.

5. **Implement inquiry-based and experiential approaches** that stimulate curiosity, metacognitive awareness and meaningful learning.

6. **Design learning activities** that align with neuroscientific evidence on chunking, multimodal input, spacing, practice, and feedback.

7. **Evaluate students' learning** using brain-compatible, formative assessment tools that encourage reflection and growth.

8. **Develop a personalised action plan** for applying neuroscience-informed strategies within their own teaching context.

Preparation

After registration participants will receive pre-course questionnaire which will be used by the trainer to learn about participants' teaching backgrounds and to assess their exact needs. Before the beginning of the course a basic reading list will be suggested to participants to prepare for the training. Participants will also be asked to prepare a presentation about themselves, their professional context and their culture. The presentation will be presented on the first day of the course to facilitate networking opportunities. Participants will receive information about the country they are going to visit in order to prepare them for their cultural experience.

Follow up

After the course participants will be asked to share what they have learned with the rest of the staff in their schools. Further books and articles to deepen the topic and contacts with some other practitioners all over Europe and in the world will be suggested by the trainer. The methods shared and explored and the bibliography given will allow the participants to complete and improve their educational path.

Certificate

Certificate complies with the guidelines of the Erasmus+ programme and includes the topic, number of didactic hours, dates and location of the course. We can list the record of learning outcomes on the Europass Mobility Document on request of participants. In case a participant requires a specific format of certificate we can accommodate that if requested at least one week before the start of the course. It is necessary to attend at least 80% of the hours in order to receive the certificate.

Accommodation

We do not directly offer accommodation and subsistence and participants are responsible for organizing it by themselves.

Paperwork

We also provide all the support with paperwork you might need for your Erasmus+ project documentation such as mobility agreement and registration letter.

Fee: 800 €

Cancelation policy

We have a flexible cancellation policy in force at the moment and you can cancel your registration up to 30 days before the course and receive a full refund. In case you don't cancel the registration more than 30 days before you will not receive any refunds, but you will be able to choose to attend any other confirmed course session later (within 6 months) without any additional costs. In case you are not able to travel, your school can send someone else to take instead of you and you can change the details of the participant any time before the start of the course at no additional cost.

TENTATIVE PROGRAMME (50 didactic hours - 5*45min per day) Monday to Friday	
Day 1	WELCOME & SETTING THE FOUNDATIONS
09.00 - 09.45	Introductions & Icebreakers
09.45 - 10.30	Course Overview & Learning Agreement
10.30 - 11.15	Activities supporting group connection and collaboration
11.15 - 11.30	Break
11.30 - 12.15	What is neuroscience? Basic overview of cognitive processes
12.15 - 13.00	Learning pathways
Day 2	UNDERSTANDING THE BRAIN: A TEACHER'S TOOLKIT
09.00 - 09.45	Brain structure simplified
09.45 - 10.30	How learners pay attention
10.30 - 11.15	Designing classroom examples of "attention boosters"
11.15 - 11.30	Break
11.30 - 12.15	Memory systems
12.15 - 13.00	Adapting a simple lesson using memory-friendly techniques
Day 3	BRAIN-TARGETED TEACHING FRAMEWORK (Targets 1–3)
09.00 - 09.45	Introduction to Dr. Mariale Hardiman's 6 Brain Targets
09.45 - 10.30	Brain Target 1**:** Creating the emotional climate for learning
10.30 - 11.15	Role-play scenarios: How emotional climate shapes engagement
11.15 - 11.30	Break
11.30 - 12.15	Brain Target 2**:** Physical learning environment
12.15 - 13.00	Brain Target 3**:** Designing meaningful learning experiences
Day 4	BRAIN-TARGETED TEACHING FRAMEWORK (Targets 4–6)
09.00 - 09.45	Brain Target 4**:** Mastery teaching
09.45 - 10.30	Converting a traditional lesson into a multi-modal experience
10.30 - 11.15	Brain Target 5: Teaching for the extension of knowledge

11.15 - 11.30	Break
11.30 - 12.15	Brain Target 6: Evaluating learning
12.15 - 13.00	Micro-teaching practice using targets 1–6
Day 5	SOCIAL & EMOTIONAL LEARNING (SEL) + ANATOMY OF FUN
09.00 - 09.45	Neuroscientific evidence for emotional regulation and academic success
09.45 - 10.30	Sarah-Jayne Blakemore's work on adolescent brains and implications for classroom
10.30 - 11.15	Anatomy of Fun
11.15 - 11.30	Break
11.30 - 12.15	Fun redesign lab
12.15 - 13.00	SEL strategies toolkit
Day 6	BRAIN GYM, COGNITIVE GAMES & EMOTIONAL LITERACY
09.00 - 09.45	The role of movement in learning
09.45 - 10.30	Practical session on Brain Gym activities
10.30 - 11.15	Games for working memory, attention control, sequencing and reasoning
11.15 - 11.30	Break
11.30 - 12.15	Emotional literacy: identifying emotions; simple classroom tools
12.15 - 13.00	Design challenge
Day 7	TRANSFORMATIVE LEARNING THROUGH ARTS
09.00 - 09.45	How the arts affect the brain
09.45 - 10.30	Transformative learning theory (Mezirow)
10.30 - 11.15	Art-based reflective activities for meaning-making
11.15 - 11.30	Break
11.30 - 12.15	Drama-inspired techniques for perspective-taking
12.15 - 13.00	Using drawing, music, drama or movement to support conceptual learning

Day 8	FIELD TRIP & INQUIRY-BASED LEARNING
09.00 - 09.45	Field trip preparation: What is inquiry-based learning?
09.45 - 10.30	Inquiry-based Learning Tasks: Observation & Question Generation
10.30 - 11.15	Inquiry-based Learning Tasks: Sensory engagement
11.15 - 11.30	Break
11.30 - 12.15	Inquiry-based Learning Tasks: Quick Scetches
12.15 - 13.00	Reflection: Why the brain remembers experiences
Day 9	INDIVIDUAL SUPPORT & ACTION-PLANNING
09.00 - 09.45	Individual consultations
09.45 - 10.30	Design coaching
10.30 - 11.15	Creating personal “Neuro-Informed Teaching Plans”
11.15 - 11.30	Break
11.30 - 12.15	Peer feedback session – using structured protocols
12.15 - 13.00	Drafting micro-projects for the last day presentation
Day 10	Individual Support, Presentations & Closing
09.00 - 09.45	Preparing the final presentations and individual support (part 1)
09.45 - 10.30	Preparing the final presentations and individual support (part 2)
10.30 - 11.15	Final presentations and feedback
11.15 - 11.30	Break
11.30 - 12.15	Evaluation & Reflection
12.15 - 13.00	Validation of learning outcomes and certification

*This is only a tentative timetable. The exact hours or the course might differ and will be announced for each session 2 weeks before the start. However, there will always be a total of 5 didactic hours per day and all will be in line with the Erasmus+ quality standards. The trainer might slightly modify the content in response to the needs of the group.

**Cultural and social programmes will be organized in addition to the academic programme. The exact cultural and social programme depends on the location, season, weather, etc.