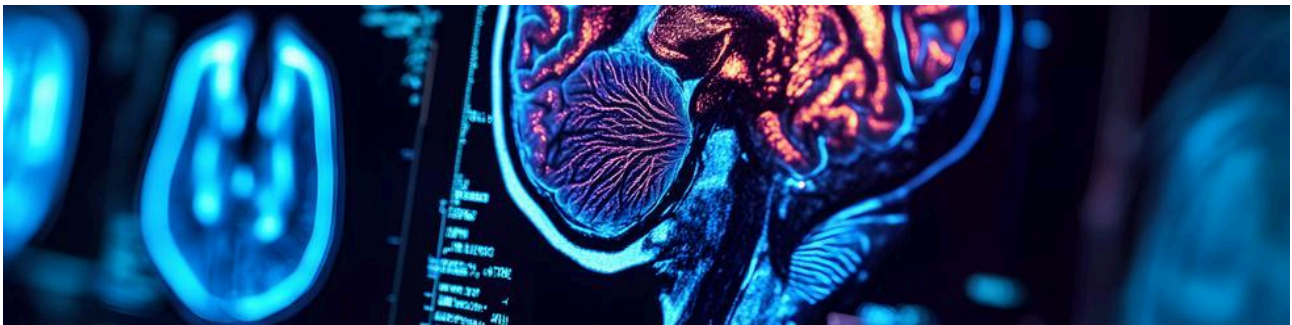## Summer school
The ARCA Summer School: Unlocking Psychological Expertise for Academic and Business Success

The Summer School **"The ARCA Summer School: Unlocking Psychological Expertise for Academic and Business Success"**, organized as part of the internationalization strategy of the University of Padua, is aimed at Master's and PhD students, both local and international. The initiative seeks to provide advanced technical and methodological skills in the field of psychological research, with a training program that combines innovative content and interdisciplinary approaches.

The main objective is to expand access to the **ARCA (Applied Research Courses Academy)** and **CARS (Advanced Courses for Scientific Research)** programs—already active during the academic year for a limited number of students—to a broader international audience. The Summer School will enable students to learn cutting-edge research tools: students will learn how to design and implement experiments, analyze neural, hemodynamic, behavioral, and textual data, interpret them using statistical methods, and communicate findings clearly and effectively.

The program is enriched by the participation of nationally and internationally renowned speakers and is co-organized with the **Department of Psychology and Cognitive Science of the University of Trento** and the **Institute of Psychology of the University of Graz**, a member of the **Arqus Alliance**.

The school is divided into two independent weekly modules, allowing for flexible participation. However, **the awarding of 6 ECTS credits** will only be possible upon attendance of **both modules** and passing the final exam.

During the **first week**, students will acquire foundational knowledge for the optimal design of experimental paradigms in psychological research, exploring both theoretical and practical aspects. Four key techniques will be introduced: **electroencephalography (EEG)**, **functional near-infrared spectroscopy (fNIRS)**, **kinematic analysis**, and **virtual reality use in brain-computer interfaces**. These methodologies will be addressed with an applied approach, through lectures and seminars delivered by national and international experts. In particular, the advantages of using fNIRS in the study of movement and the analysis of emotions through facial expressions will be discussed.

The **second week** will focus on the acquisition of **computational and statistical skills**. Students will learn basic concepts of the most commonly used programming languages in psychological research, such as **Python and R**, through a cross-disciplinary introductory course. They will also learn to create scientific

reports and presentations using **Quarto** software and to design **Shiny Apps**, open-source interactive web applications developed in R.

Another module will be dedicated to **quantitative text analysis**, a rapidly growing field that involves the use of advanced tools to extract knowledge from large volumes of textual data. Students will also cover the **basics of machine learning**, applied to the modeling of psychological data, and will take part in a seminar on **neuroethics**, a topic of increasing relevance in cognitive neuroscience.

Overall, the Summer School will provide students with a **comprehensive and multidimensional education**, useful for developing cross-disciplinary skills that are increasingly in demand in both academic and professional settings.

Beyond technical skills, the experience will offer the opportunity to **hear firsthand insights from international experts** and engage with them, creating concrete opportunities for **networking**. In a context of growing digital transformation, the Summer School will also help enhance students' **problem-solving abilities** and **digital skills**, which are essential in many research and professional environments.

Applications will be evaluated in progress. In particular, applications sent within 31st January 2026 will receive feedback within 13 February 2026. Applications sent after 31st January 2026 will receive feedback within 27 March 2026. In both cases, admitted applicants will receive instructions via email on how to accept their place. We strongly invite applicants to submit their applications **as soon as possible**, preferably within 31st January.

Note for Unipd students enrolled in master's degree programmes who attend both weeks of the Summer School and pass the final exam with a mark out of thirty:

For students enrolled in master's degree programmes in *Applied Child and Adolescent Psychology*, *Psicologia Clinica dello Sviluppo*, *Psicologia dello Sviluppo e dell'Educazione*, *Psicologia di Comunità, della Promozione del Benessere e del Cambiamento Sociale*, and *Clinical, Social and Intercultural Psychology*: the exam can be included in the study plan, and students must submit a request for credit recognition via ticket, following the instructions in the section "Riconoscimenti di altre tipologie" at the following link: https://www.unipd.it/consulenza-carriera-libretto. The Student Careers Office will add the activity to the online transcript and students must then modify their study plan.

For students enrolled in the master's degree programmes in *Cognitive Neuroscience and Clinical Neuropsychology* and in *Neuroscienze e Riabilitazione Neuropsicologica*: the student may request that the exam be included in their academic record as an extra credit. The exam grade will therefore not count towards the degree score. Students must submit a request for credit recognition using the ticket system, following the instructions in the section "Riconoscimenti di altre tipologie" at the following link: https://www.unipd.it/consulenza-carriera-libretto. The Student Careers Office will enter the activity in the online transcript as an extra credit.

All other master's students are advised to contact the Course Director in advance to ask whether the Summer School can be recognised as free credit by submitting a specific credit recognition request, which must be submitted via ticket following the instructions in the "Riconoscimenti di altre tipologie" section at the following link: https://www.unipd.it/consulenza-carriera-libretto. The Student Careers Office will enter the activity in the online student record book.

KEY INFO

Dates: 29th June 2026 – 10th July 2026

Module 1: Experimental design + neuroscientific methods (EEG, fNIRS, motion tracking, VR)
Seminars on **movement and emotion analysis**
Module 2: Programming (Python, R), Quarto for reporting, Shiny Apps, text analysis, ML - Includes a **seminar on neuroethics**

Target: Master's and PhD students

Minimum number of participants: 20

Maximum number of participants: 30

Location: Padua, Psychology Campus

ECTS: 6, only for participants who attend both modules and pass the final exam

Fee: 500 euros per week / 20% fee waiver for students of partner universities / 50% fee waiver for Arqus students (including UNIPD students). A maximum number of waivers might apply.

Contact: summerschool@unipd.it

Application dates: 15th November 2025 – 15th March 2026. Applications sent within 31st January 2026 will be evaluated in progress.

For more information, please check out the dedicated website.