



UNIVERSITÀ DEGLI STUDI
DI TRENTO

CIMeC - Center for Mind/Brain Sciences



DOCTORAL PROGRAM IN COGNITIVE AND BRAIN SCIENCES

2024-2025 STUDENT HANDBOOK

Approved by the Doctorate Program Committee on 22 October, 2024

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Welcome to the PhD program in Cognitive and Brain Sciences at CIMeC!

The PhD in Cognitive and Brain Sciences is promoted by CIMeC, the Interdepartmental Mind/Brain Center of UniTrento. The training program is based on multi-disciplinary skills in the area of mind and brain sciences that the teaching staff involved in the PhD defines. A fundamental resource is its laboratories, which offer the most advanced methods for the study of the neural correlates of cognitive functions (3T fMRI, EEG, MEG, TMS, NIRS), for the measurement of human and animal behavior (movement kinematics, eye movements, equipment for the collection of psychophysical data), for molecular neurobiology and neuroanatomy, for the collection of neurophysiological data and for the modeling of brain functioning mechanisms (neuroinformatics). In this context, PhD students can acquire high-level skills in specific research sectors, both basic and applied, thus enriching their opportunities. Furthermore, the strong interdisciplinary format favors the development of innovative and frontier paths in the field of cognitive neuroscience through the integration of knowledge from different research areas but linked by a common scientific interest, the study of the nervous system, of mental processes and of behaviour. There are also seminar initiatives that enhance the educational potential of training definable as "traineeship", where doctoral students are called to play an active role in their research. The PhD lasts 4 years; the activities are carried out in English and require active participation. The training environment is enriched by the presence of numerous post-docs and by a large flow of researchers and visiting professors from Italy and abroad.

The Student Handbook aims to provide a concise overview of the main activities that will characterize your PhD, as well as general information concerning the doctoral program organization. You should use it as a reference throughout your PhD career. As a Yr1 student you receive a hard copy of it on the day of your first meeting with the PhD program Director. For the following years make sure to download the updated Student Handbook at the beginning of each November from the CIMeC "[PhD Resources](#)" wiki section (you must log in with your UNITN credentials first).

Be sure to carefully read this document throughout.

1.

DOCTORATE PROGRAM ORGANIZATION

Director of the Doctorate Program
Massimo Turatto

Deputy-Director of the Doctorate Program
Massimiliano Zampini

Doctorate Program Executive Committee
Massimo Turatto, Massimiliano Zampini, Uri Hasson, Stefania Pighin, Eugenio Parise, Michael Lombardo

Doctoral Program Committee
Daniel Baldauf, Lorella Battelli (IIT), Paolo Belardinelli, Raffaella Bernardi, Roberto Bottini, Yuri Bozzi, Stefania Bracci, Luigi Cattaneo, Corrado Corradi Dell'Acqua, Alessandra Dodich, Scott Fairhall, Elisabetta Farella (FBK), Elisa Frasnelli, Alessandro Gozzi (IIT), Giorgio Fumagalli, Albrecht Haase, Uri Hasson, Jorge Jovicich, Michael Lombardo (IIT), Uwe Mayer, Veronica Mazza, Carlo Miniussi, Emanuele Olivetti (FBK), Costanza Papagno, Eugenio Parise, Francesco Pavani, Manuela Piazza, Stefania Pighin, Paolo Rota, Silvio Sarubbo, Jakub Szymanik, Valeria Sovrano, Katya Tentori, Stefano Teso, Massimo Turatto, Luca Turella, Giorgio Vallortigara, Moritz Wurm, Massimiliano Zampini

Additional Faculty and Supervisors
Claudia Bonfiglioli, Giuliano Iurilli (IIT), Simona Monaco, Stefano Panzeri, Federico Rossi (IIT), Paola Sgadò, Roberto Zamparelli

Doctorate Program Administrator
Leah Mercanti

Student Representatives

- 39th and 40th cycle: TBD
- 37th cycle and 38th cycle: Laura Battistel and Debora Spagnolo

CIMeC's Consiglio PhD Student Representative

- Debora Spagnolo

Current PhD Students (*PhDS*)

40th cycle (Year 1)	39th cycle (Year 2)	38th cycle (Year 3)	37th cycle (Year 4)	36th cycle (Extension)
Michele Acconcia	Alessandra Barbon	Valeria Bedin	Laura Battistel	Alice Adiletta
Alp Akova	Marisa Monika Amalie Birk	Luca Betteto	Andrea Belluzzi	Jayro Martinez Cervero
Margherita Bisaglia	Yadunandan Edayadathodi	Matteo De Matola	Davide Cortinovis	
Benedikt Paul Fuhr	Chiara Fornari	Silvia Gini	Alexander Charles Leslie Eperon	
Yiping Ge	Greta Gaimarri	Alessandra Gobbo	Elena Gessa	
Atri Ghosh	Paolo Ghin	Davide Mazzaccara	Elena Giovanelli	
Marco Giglioizzi	Giulia Mazzi	Elisa Pasquini	Yasaman Heydari	
Mohit Kumar Jaiswal	Cristina Pagliara	Debora Spagnolo	Martina Mancano	
Davide Liga	Dario Pesenti	Marco Tagliaferri	Chiara Pepe	
Nicole Mancin	Valerio Rubino		Matilde Perrino	
Ilaria Mirlisenna	Ines Severino		Enrica Pierotti	
Jessica Muraro	Heather Nicole Strelevitz		Chiara Riccardi	
Manu Raghavan Pullur	Roberta Vertullo		Samantha Sartin	
Martina Schiano Visconte			Michele Tosi	
Mila Urosevic			Le Minh Nhut Truong	
Aseka J. Wickramarachch			Laura Vavassori	
Shiyao Xu				

2.

DOCTORAL PROGRAM MEMBER DESCRIPTIONS

SUPERVISOR

The Supervisor is a member of the CIMEC or external member of the Doctorate Program Committee of the School. The Supervisor's role is to follow and supervise the academic path and research activities of his/her Student and is one of the 3 members of the PhD'S Oversight Committee. The Supervisor for each Student is designated by the Executive Committee at the onset of the PhD program.

CO-SUPERVISOR

Co-supervision is obligatory and is one of the Oversight Committee members other than the Supervisor of the Student. Should the Student's Supervisor not be a University faculty member, then the Co-Supervisor must be a University faculty member, preferably at the Doctorate in Cognitive and Brain Sciences.

OVERSIGHT COMMITTEE (OC)

At various points of the program, Students present their work to an Oversight Committee (OC) made up of the Supervisor and two other experts (one of which is the Co-Supervisor). At least one member of the OC must be a member of the Doctorate Program Committee of the Doctorate in Cognitive and Brain Sciences. The OC is appointed by the Supervisor after coordinating with the Student, and then confirmed by the Executive Committee. Upon completion of a Student's presentation or written report, the OC has the obligation of supplying the Student with feedback (both written and oral) immediately. The members of the Student's OC remain the same throughout the four years of the Doctorate.

Instructions for nominating your OC: By December 15th of Yr1, upon consulting with your Supervisor and checking first with the proposed OC members, email Leah, CC'ing your Supervisor with your OC nominations, specifying which one is the Co-Supervisor.

MENTOR

A Mentor is a senior scientist, typically a full or associate professor that has been at the CIMEC for at least three years, and who will be available throughout the Student's doctorate. PhDs students are encouraged to meet with the Mentor at least once a year. Typically, the Mentor is not involved in the research of the PhDs. His/Her role is mainly to support the PhDs on issues other than the specific PhD research project. Mentors are chosen by the PhD Students, among the DPC, but may also be faculty who have been members of another Doctoral Program for at least three years, pending authorization from the Executive Committee. Mentors contact the PhDs in Yr1 but subsequent meetings are initiated by the PhDs.

Instructions for choosing your Mentor: email Leah with your Mentor preference by December 15th of Yr1. The EC will then verify the Mentor's availability and formalize your request. A message will then be sent to both PhDs and the nominated Mentor. If a Mentor is not chosen by the PhDs, then one will be assigned by the EC.

PHD DIRECTOR

The PhD Director is elected by the DPC, the position lasts 3 years, and is renewable once. As the principle academic representative of the Doctorate in Cognitive and Brain Sciences the PhD Director is responsible for the overall well-being of the Program, other than coordinating its affairs. The PhD Director is member by right of the EC.

PHD DEPUTY-DIRECTOR

The PhD Deputy-Director is nominated by the PhD Director soon after the election and lasts as long as the Director's mandate. The Deputy-Director substitutes the PhD Director for institutional matters should the Director be unavailable.

PHD STUDENT REPRESENTATIVES

Given that the PhD Program lasts 4 years, there are two PhDs representatives: one "Junior" (Yr1 & 2) and one "Senior" (Yr3 & 4). Representatives are the voice of the student body of the Doctorate and represent

you in the Doctoral Program Committee meetings. Every other year the representative who is elected by the entire PhD student body also takes part in the CIMeC's Consiglio meetings.

PhD ADMINISTRATOR (PA - Leah)

The PhD administrator's role is to provide support to all doctoral program Students and Supervisors in their daily and long-term PhD program related activities. Main activities include PhDs admission selection, student oral defence organization, support to the EYE-C, EC and DPC, as well as to Student representatives, Student Handbook, annual internal reports, and doctorate logistics.

Maintaining a constructive relationship with your Supervisor, your colleagues and the CIMeC community-at-large is one of the essential ingredients for a successful PhD. Should you experience difficulties during your studies, you are encouraged to contact any of the following key people within the program: your Supervisor, other members of your Oversight Committee and/or your Mentor. The Director of the Program and the Deputy-Director as well as the PA can also provide support. The Confidential Counsellor and Psychological Counselling at the University of Trento are available services in case of matters to discuss outside the PhD program. More information about them are available on the University website:

- [Confidential Councilor](#)
- [Psychological Counseling](#)

DOCTORAL PROGRAM COMMITTEE (DPC)

The Doctoral Program Committee consists of Faculty and Supervisors who are members of the CIMeC Doctoral Program. The DPC operates according to the duties under Art. 12 of the Doctoral Regulations of the University of Trento and is summoned approximately between 4 and 7 times a year.

EXECUTIVE COMMITTEE (EC)

The Executive Committee assists the Director of the Program in fulfilling his or her duties under Art. 14 of the Doctoral Regulations and deliberates on matters delegated by the Doctoral Program Committee. It is composed of at least 4 elected members of the DPC other than the Director of the Program, who is a member by right and chairs the meetings. The EC meets approximately 5 times throughout the year.

END-YEAR EVALUATION COMMITTEE (EYE-C)

Before the end of each academic year, the DPC determines the pass/fail status of Students in order to be admitted to the following year. Students, Supervisors and Course Lecturers provide a checklist to a separate committee made up of a minimum of 2 members of the DPC, nominated by the Executive Committee, which is called the End-Year Evaluation Committee (EYE-C). The duty of the EYE-C is to review all checklists, feedback, evaluations and reports, and to provide a recommendation-based summary to the DPC. The EYE-C has the remit to collect any additional information from Supervisors, Students or other sources deemed relevant to its duties.

PhD TRENTO OFFICE (CSSH)

PhD Students should contact the Humanities and Cognitive Sciences Area - PhD Office (phd.office-cssh@unitn.it) directly for the following purposes:

- Yearly enrolments and certifications, also for permesso di soggiorno purposes
- TDS payment
- Diploma
- Formal final exam requests
- Bank change information
- Period abroad certifications and paperwork

3. OVERALL PLAN OF ACTIVITIES

The Doctorate in Cognitive and Brain Sciences uses an online PhD organization and depository tool called “PhDigital” ([url: phdigital.cimec.unitn.it](http://phdigital.cimec.unitn.it)). Most of your PhD tasks, deadlines and reports are managed via this online platform. Your obligation is to continuously log your activity (educational, public engagement, conferences) throughout the year. **PhDigital deadlines are the School’s deadlines and must be observed or students risk expulsion.** For almost all tasks PhD students, Supervisors, OC members, Course Coordinators and Mentors receive alerts in their email box prompting them to enter PhDigital in order to complete their upcoming deadlines.

To assist planning your PhD, a Gantt diagram of the Program’s activities is provided on pg. 11 for all 4 years. The diagram identifies the periods in which student assignments, evaluations and administrative actions occur. You are to consult with this in planning your PhD activity in addition to PhDigital.

Please note that the PhD program at CIMEC is residential. Long absences are not permitted, unless previously approved by the Supervisor and the Executive Committee, who guarantee that the absence is motivated by the research activity. Foreseeable absences longer than two weeks must be communicated at least 1 month in advance to the PhD administrator by the Student in writing, approved by the Supervisor and taken note of by the Course Lecturer, should the absence overlap with a course the Student is enrolled in. **Repeated unjustified absences or a delay in completing an assignment will be reported to the Doctoral Program Committee and may lead to the expulsion from the doctoral program.**

All courses are in presence in rooms that are double the capacity of the maximum number of occupants. Should it be absolutely necessary they may run online. Please check with the Course Coordinator should the latter be the case.

Holidays observed in 2024-2025 are as follows:

<u>2024</u>	<u>2025</u>
Nov. 1	Jan. 1, 6
Dec. 25-26	Apr. 21, 25
	May 1-2
	June 2, 26 (only Mattarello)
	Aug. 5 (only Rovereto), 15

All other interruptions must be agreed upon with the Supervisor and Course Lecturers should the absences coincide with course dates *no matter how long the absence*.

3.1 2024/25 DEADLINE CHECKLIST

YEAR 1 – Cycle 40		Due date
Study plan		
<input type="checkbox"/>	Proposed YR1 study plan	10/01/2025
<input type="checkbox"/>	Final YR1 study plan	09/09/2025
Research project		
<input type="checkbox"/>	Research plan	10/01/2025
<input type="checkbox"/>	Research plan approval	15/01/2025
<input type="checkbox"/>	Doctoral Student Day poster	31/01/2025
<input type="checkbox"/>	YR1 research presentation	15/09/2025
<input type="checkbox"/>	YR1 research presentation feedback by the Oversight Committee	25/09/2025
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab / Supervisor meetings	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of attended Colloquia	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of attended CIMeC Seminars	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of participation and public engagement activities	Ongoing - 05/10/2025
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS	Ongoing - 05/10/2025
YEAR 2 – Cycle 39		Due date
Study plan		
<input type="checkbox"/>	Proposed YR2 study plan	30/11/2024
<input type="checkbox"/>	Final YR2 study plan	09/09/2025
Research project		
<input type="checkbox"/>	YR2 project proposal presentation	15/09/2025
<input type="checkbox"/>	YR2 project proposal feedback by the Oversight Committee	25/09/2025
Assignments		
<input type="checkbox"/>	Critical Literature Review (CLR)	15/09/2025
<input type="checkbox"/>	Critical Literature Review (CLR) feedback by the Oversight Committee	25/09/2025
<input type="checkbox"/>	Doctoral Student Day poster/talk	31/01/2025
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab / Supervisor meetings	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of attended Colloquia	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of attended CIMeC Seminars	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of participation and public engagement	Ongoing - 05/10/2025
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS	Ongoing - 05/10/2025

YEAR 3 – Cycle 38*		Due date
Study plan		
<input type="checkbox"/>	Proposed YR3 study plan	30/11/2024
<input type="checkbox"/>	Final YR3 study plan	09/09/2025
Research project		
<input type="checkbox"/>	YR3 project progress presentation	15/09/2025
<input type="checkbox"/>	YR3 Year project progress feedback by the Oversight Committee	25/09/2025
Assignments		
<input type="checkbox"/>	Doctoral Student Day poster/talk	31/01/2025
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab / Supervisor meetings	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of attended Colloquia	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of attended CIMEC Seminars	Ongoing - 05/10/2025
<input type="checkbox"/>	Log of participation and public engagement activities	Ongoing - 05/10/2025
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS	Ongoing - 05/10/2025

* English B2 level certification for those students who didn't present a valid (max. 2 yrs old) certification at the onset of the PhD.

YEAR 4 – Cycle 37		Due date
Research project		
<input type="checkbox"/>	YR4 project results presentation	01/07/2025 (if thesis discussion in November), otherwise 15/09/2025
<input type="checkbox"/>	YR4 project results feedback by the Oversight Committee	10/07/2025 (if thesis discussion in November), otherwise 15/09/2025
Assignments		
<input type="checkbox"/>	Doctoral Student Day poster/talk	31/01/2025
<input type="checkbox"/>	Thesis abstract	15/09/2025**
<input type="checkbox"/>	Thesis delivery	15/09/2025**
<input type="checkbox"/>	CIMEC Seminar presentation	30/06/2025
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab/Supervisor meetings (ongoing)	01/09/2025 (if thesis discussion in November), otherwise 05/10/2025
<input type="checkbox"/>	Log of Colloquia attended (ongoing)	01/09/2025 (if thesis discussion in November), otherwise 05/10/2025
<input type="checkbox"/>	Log of CIMEC Seminars attended (ongoing)	01/09/2025(if thesis discussion in November), otherwise 05/10/2025
<input type="checkbox"/>	Log of participation and public engagement activities(ongoing)	01/09/2025 (if thesis discussion in November), otherwise 05/10/2025
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS (ongoing)	01/09/2025 (if thesis discussion in November), otherwise 05/10/2025

*37th cycle PhD students must already have completed the Yr3 paper under-review assignment in order to start the thesis review process.

**depending on your specific situation please refer to final exam chart on pg. 28

3.2.1 PHD PROGRAM GANTT DIAGRAMS BASED ON YEAR OF ENROLMENT - YEAR 1 (40TH CYCLE)

YEAR 1 - 40th cycle	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
DPC assigns Supervisor												
Student and Supervisor nominate Oversight Committee												
Proposed Study Plan												
Research plan												
Doctoral Student Day poster												
Update Digital University profile and publications in IRIS												
Activity log entries in PhDigital												
Yr1 research presentation with OC												
CIMeC Seminar presentation												
OC Feedback: Yr1 research presentation												
Final Study Plan												
Evaluation period												
Evaluation period												
EYE-C review, report to DPC for admission to Yr2												
DPC evaluates PhD student admission to Yr2												
Abbreviations: Doctoral Program Committee (DPC), Executive Committee (EC), Oversight Committee (OC), End-Year Eval Committee (EYE-C)												
Color coding legend: Administrative tasks (gray), Student tasks (blue), Supervisor/OC tasks/feedback (red)												

3.2.2 PHD PROGRAM GANTT DIAGRAMS BASED ON YEAR OF ENROLMENT - YEAR 2 (39TH CYCLE)

YEAR 2 - 39th cycle	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Proposed Study Plan												
Doctoral Student Day postertalk												
Update Digital University profile and publications in IRIS												
Activity log entries in PhDigital												
Yr2 project proposal presentation with OC												
CIMEC Seminar presentation												
Critical Literature Review (CRL) document												
OC Feedback: Critical Literature Review (CRL)												
Final Study Plan												
Evaluation period												
Evaluation period												
EYE-C review, report to DPC for admission to Yr3												
DPC evaluates PhD student admission to Yr3												
Abbreviations: Doctoral Program Committee (DPC), Executive Committee (EC), Oversight Committee (OC), End-Year Eval Committee (EYE-C)												
Color coding legend: Administrative tasks (gray), Student tasks (blue), Supervisor/OC tasks/feedback (red)												

3.2.3 PHD PROGRAM GANTT DIAGRAMS BASED ON YEAR OF ENROLMENT - YEAR 3 (38TH CYCLE)

YEAR 3 - 38th cycle	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Proposed Study Plan												
Doctoral Student Day poster/talk												
Update Digital University profile and publications in IRIS												
Activity log entries in PhDigital												
CIMEC Seminar presentation												
Yr3 project progress presentation												
OC Feedback: Yr3 project progress												
Final Study Plan												
Evaluation period												
Evaluation period												
EYE-C review, report to DPC for admission to Yr4												
DPC evaluates PhD student admission to Yr4												
Abbreviations: Doctoral Program Committee (DPC), Executive Committee (EC), Oversight Committee (OC), End-Year Eval Committee (EYE-C)												
Color coding legend: Administrative tasks (gray), Student tasks (blue), Supervisor/OC tasks/feedback (red)												
In order to be admitted to Yr4, in addition to the tasks listed above, students must also obtain at least B2 level of a valid (max. 2 yrs since applying to the PhD program), internationally recognized English certification (i.e. IELTS, TOEFL).												

3.2.4 PHD PROGRAM GANTT DIAGRAMS BASED ON YEAR OF ENROLMENT - YEAR 4 (37TH CYCLE)

YEAR 4 - 37th cycle	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Doctoral Student Day postertalk												
CIMEC Seminar presentation												
YR4 project results presentation												
OC Feedback: YR4 project results												
Peer-reviewed Paper/Conference Proceeding												
Update Digital University profile and publications in IRIS												
Activity log entries in PhDigital												
Evaluation period												
Evaluation period												
Thesis delivery (Sept. for Nov. Final Exam, April for June FE of following year)												
Feedback to Final Exam Committee: Supervisor report												
DPC evaluates admission to thesis Review process												
Thesis delivered to Reviewers												
Abbreviations: Doctoral Program Committee (DPC), Executive Committee (EC), Oversight Committee (OC), End-Year Eval Committee (EYE-C)												
Color coding legend: Administrative tasks (gray), Student tasks (blue), Supervisor/OC tasks/feedback (red)												

3.3. Yearly Admission

As specified in the Checklist and Gantt diagrams above, admission to the following year of your PhD depends on approval by the Doctoral Program Committee and will result in one of three options: pass, pass with reserve or fail.

The Doctoral Program Committee's decision to admit PhD Students to the following year is based on:

- 1) performance in developing the thesis project and presenting it on the deadline dictated by the School;**
- 2) completing the PhD program's assignments in due time;**
- 3) completing all course requirements and passing all the COMPULSORY and elective courses in the study plan by Yr1 or Yr2 (depending on the type of course);**
- 4) the self-reported final study plan and minimum requirement attendance at CIMEC Colloquia, CIMEC Seminars and other seminars, Supervisor/Lab meetings and general activities;**
- 5) participation/public engagement in the Center's activities.**

In order to be admitted to Yr4, in addition to the tasks listed above, students must also obtain at least B2 level of a valid (max. 2 yrs since applying to the PhD program), internationally recognized English certification (i.e. IELTS, TOEFL).

4. STUDY PLANS AND COURSE OBLIGATIONS

Each year PhD students fill out the study plan twice for that specific year: at the beginning of the academic year it's necessary to declare which courses and activities you plan on taking (the "proposed study plan"). The "final study plan" is where you state the actual courses and activities you took. You must **discuss both study plans** with your supervisor, who will review and approve them.

Starting on pg. 16 you will find a concise description of each of the PhD activities and courses, arranged in terms of general training objectives. Preparing your study plan means deciding which of these courses or activities to pursue this year, with a regard of what you want to achieve throughout your PhD, and keeping in mind that **all courses must be taken within the first two years**. Some of the activities and courses are COMPULSORY, whereas electives constitute an opportunity for further training. Nevertheless, **electives must make up at least 10 credits (60 hrs) in your study plan, taken within the first two years**. The Doctorate Program encourages the student to look into the educational offerings throughout the University in order to fulfill elective courses, with priority given to our PhD program's courses should the same or relatively similar topic be covered elsewhere. Non-doctorate in Cognitive and Brain Courses – "External courses" in PhDigital - are not listed in PhDigital so they must be entered by the PhD students themselves under "External Courses". Like all courses in a student's study plan, the course may only be taken prior to both Supervisor's and Executive Committee's approval. Courses offered by the PhD program tend to run until the end of July and beginning of September.

Instructions on filling out your Study Plan are in PhDigital and in the email alert you receive to enter your courses in PhDigital. Further details may be found in the CIMEC Wiki Pages PhD resources, under the PhDigital FAQ. Either way, **the study plan can be filled out and modified only during specific periods of the year: November for Yr2, 3 and 4, and January for Yr1, and then again in September/October for the final study plan**. A red symbol will appear next to the task in your PhDigital profile when it is possible to complete this section, or it is overdue.

Absences

Course attendance is generally COMPULSORY. For each course a student is allowed up to 25% absences, even in the case of Magistrale courses. Where applicable, the student should indicate their absence for work-related reasons (such as conference travel or lab time) in advance to the course lecturer. There is no distinction between different absences. If a Student exceeds 25% of these absences he/she will be required to re-take the course the following year in order to make up for it.

Course evaluations

The evaluation method of a course is determined by the lecturer of each course. Details on how and when the evaluation shall take place are the responsibility of the course lecturer and are shared with the Students within the first 2 lessons of the lecture. The general guideline for PhD Lecturers is: course evaluations take place within 2 weeks from the end of the course and feedback is provided within 3 weeks from when the evaluation takes place. Should the student fail a course for any reason, the course lecturer emails the fail to the Student cc'ing his/her supervisor. **The last possible date for a course evaluation is Sept. 8 each year.**

External course credits

In case the CBS Doctoral Program does not offer a course/courses in the field of expertise of/relevant to the PhD project, students may take an additional course/courses of their choice at another PhD or master's level program within the University of Trento or online. Details must be given by the student to Leah via the proposed (by November for Yr2, 3 and 4 students, and by January 10 for Yr1 Students) and final study plan (by and pass/fail status or certifications by Lecturer must be **uploaded in the PhDigital by 9 September**). Students may want to consider courses in the Masters in Cognitive Neuroscience offered by CIMEC, in the Information and Communication Technology International Doctoral program and in the International Master in Human Language Technology and Interfaces), which schedules can be found [here](#). Some Master courses have exams that take place ~6 weeks after the course ends so Students should consider this while filling out their study plan.

Course credits obtained from other institutions, including summer schools, 'Coursera', etc. during the Program can be proposed in the study plan. In this case external course syllabi, schedules, **pass/fail status** and course instructor names

must be added to the proposed study plan and final documentation (certifications) uploaded in PhDigital while the final study plan session is open. If the study plan in PhDigital is void of this information it will not appear in your career report (no credit will be given). In order to obtain credit for your external course it must have a final test or project on the basis of which you pass the course.

Course registrations in the study plan are final. PhD students who enter an elective course in their study plan are obligated to take it. If a Student has an impediment for which he/she can no longer take the course then he/she must give at least a 1-month notice to the course lecturer and to the PA. If such notice is not given in due time, the Student is obligated to take it or it will appear as a fail in their transcript.

4.1 COMPULSORY CREDITS

Compulsory courses cannot be substituted
6 frontal hours = 1 credit
FT = Frontal teaching
R = Research

1- MANAGE, MONITOR AND WRITE YOUR PROJECTS

Course	Lecturer	When	Type	Hours
Make the most of your PhD				
Introduction to the PhD program at CIMEC	M. Turatto, L. Mercanti	YR1	FT	2
Being a PhDS at CIMEC	YR4 Students	YR1	FT	2
Time Management	A. Dodich	YR1	FT	2
YR1 Doctorate Review	M. Turatto, L. Mercanti	End of YR1	FT	1
Programming*	External or at UNITrento	YR1 or YR2	FT	24
Academic writing*	CLA lecturers	YR 2	FT	24

* Should students be beginners or need introductory courses they cannot take an online course. Should PhDS already have proven programming skills or be an English native speaker with proven (by the Supervisor) academic writing skills he/she may choose 24 extra hours of electives in addition to the minimum (60 hrs) or Teaching Assistance for an equivalent amount of hours (see pg. 25 for details).

2- ETHICS AND GOOD PRACTICE OF RESEARCH

Course	Lecturer	When	Type	Hours
Ethics of research in Neuroscience				
General	C. Bonfiglioli	YR1	FT	2
Human track	C. Bonfiglioli	YR1	FT	6
Animal track	P. Sgadò	YR1	FT	6
Code of conduct in science	S. Pighin	YR1	FT	4

3- PARTICIPATE IN THE LIFE OF YOUR INSTITUTION

Course	Reference	When	Type	Hours
Colloquia / Attendance	M. Wurm + CCC / Invited speakers	Each year	FT	3 / 6
CIMEC Seminar / Attendance	Phd Students	Each year	R	12
Doctoral Student Day	L. Turella / Phd Students	Each year	FT	6 / 8
Participation / Public engagement	L. Mercanti	Each year	FT	Variable
Open Science - Third mission	C. Miniussi A.Dodich	YR1	FT	6

4- PHD RESEARCH ACTIVITY

Activity	Actors	When	Type	Hours	Yr
Research activity	PhDS	Each year	R	1000	1-4
Supervisor/Lab Meetings	PhDS/Supervisor	Each year	R	24	1-4
Doctoral Student Day poster/talk	PhDS	Each year	R	6	1-4
Critical Literature Review (CLR)	PhDS	YR2	R	60	2
Peer-reviewed research paper or peer-reviewed conference proceeding	Phd Student	Year 3	R	24	(37 th cycle only)
Under-review paper/review/pre-print or peer-reviewed conference proceeding (pg.19)	PhDS	By thesis delivery for review	R	24	Yr1-4 (for cycles 38, 39 + 40)
CIMEC Seminar Presentation	PhDS	At least 1, no more than 2, by YR4	R	6	1-4
Research project presentation	PhDS	Each year	R	36	Yr1, 2, 3 4
Thesis	PhDS	YR4	R	240	Yr4

5- SAFETY AND PRIVACY

As part of your own research objectives PhD students also need to keep up-to-date with **safety and privacy certifications**. Please check with your Supervisor and email the certifications to Leah within 1 month of Program start. A general, and low and/or medium online course on safety in the workplace is **COMPULSORY** for all UNITN personnel. **Until you pass these courses you cannot have access to the CIMEC labs.**

4.2 ELECTIVE CREDITS**6- RESEARCH COMMUNICATION**

Course	Lecturer	When	Type	Hours
RC1				
Data visualization	S. Bracci	YR1	FT	6
RC2				
Figures and posters	R. Bottini	YR1	FT	9
RC3				
Conference presentations	R. Bottini	YR1	FT	12
RC4				
Writing, How to Respond to Reviewers	J. Jovicich	YR1	FT	12
RC5				
How to Review a Journal Article	A. Dodich	YR1	FT	6

7- TOWARDS THE FINISH LINE

Course	Lecturer	When	Type	Hours
Seminars offered to Senior PhD Students by the Research Support Office at UNITN.	Direzione Servizi alla Ricerca e Valorizzazione	YR4	FT	vary

8- ANALYZE YOUR STUDIES

Course	Lecturer	When	Type	Hours
Research Design (154148 – LM course: Cognitive Science)	U. Hasson/M. Wurm	YR1	FT	21
Introduction to Computer Programming (Matlab) (154136 – LM course: Cognitive Science)	S. Fairhall/M. Wurm	YR1	FT	42
Introduction to Computer Programming (Python) 154140 – LM course: Computational and theoretical modelling of language and cognition)	P. Rota	YR1	FT	42
Python	L. Petrucco	YR1	FT	32

9- ACHIEVING EXPERTISE

Course	Lecturer	When	Type	Hours
Introduction to Methods				
Methods 1: EEG	V. Mazza	YR1	FT	15
Methods 2: fMRI	J. Jovicich	YR1	FT	12
Methods 3: MEG	D. Baldauf	YR1	FT	9
Methods 4: TBS	C. Miniussi	YR1	FT	12
Methods 5: ACN	P. Sgadò – U. Mayer	YR1	FT	9
Source connectivity with MEG/EEG signals	P. Belardinelli	YR1	FT	12
Other skills				
Neuroanatomy	L. Cattaneo	YR1	FT	8
Teaching Assistance (see details for Teaching Assistance pg. 26)	PhDS	All years	FT	40 max.

For **Laurea Magistrale in Cognitive Science Courses** please check out:

<https://offertaformativa.unitn.it/en/lm/cognitive-science/courses-timetable-exams>
<https://easyacademy.unitn.it/AgendaStudentiUnitn/?>

4.3 COURSE AND ASSIGNMENT DESCRIPTIONS

1 – MANAGE, MONITOR AND WRITE YOUR PROJECTS

Make the most of your PhD (COMPULSORY)

These attendance-only seminars include an **introduction to the PhD program at CIMEC**, held by the PhD program Coordinator and the PhD administrator; a **meeting with Yr4 PhD Students at CIMEC**; and tips on **time management**. The aim of the “Being a PhD Student at CIMEC” seminar is that of getting first-hand, “insider” tips from the PhD Students from previous years. A solid background in **programming** is strongly recommended, since it is a mainstream skill PhD Students ought to have acquired by the end of their PhD career. Finally, a course in Yr2 on **academic writing** furthers students’ ability to draft a part of an academic paper and then improve it through a variety of tools, applying their knowledge of textual, grammatical, and lexical features of written academic English.

Should students not be of English mother tongue criteria for being admitted to the 4th year of the PhD is passing a minimum **B2 level English exam** (IELTS or TOEFL).

2 – ETHICS AND GOOD PRACTICE OF RESEARCH

Ethics of Research in Neuroscience (COMPULSORY)

The purpose of this course is to engage Students with considerations on the responsible and ethical conduct of scientific research. What are the researcher’s obligations towards participants, colleagues and society at large? Following a first introductory lecture, common to all students, the course is divided into two tracks, one focused on research involving human participants, the other focused on animal research. Students will choose which track to follow, depending on their research interests. The evaluation will be based on participation in class discussions and completion of a written assignment.

Please note: in order to fulfill the absence criterion (max. 25%) students are allowed to miss one lecture out of three.

- *Introductory lecture (2 hours) on Research ethics*

Brief history of the introduction of ethical considerations in human and animal research; obligations of researchers towards individuals and society. Class will focus on issues important when conducting research involving human participants or animals, including results interpretation and dissemination

- *Human track*

- Focus on the Declaration of Helsinki (3 hours): Analysis of the international reference document on the ethical principles guiding research with human participants.
- Submitting a protocol for ethics approval to CER (Comitato Etico per la Ricerca, Research Ethics Committee; 3 hours): the guidelines for submitting an approval request to the UniTN CER will be illustrated, with a particular emphasis on important issues such as informed consent, special care towards vulnerable populations, participants’ privacy protection.

- *Animal track*

- Focus on the Directive 2010/63/EU on the protection of animals used for scientific purposes (4 hours): Analysis of the European reference document on the ethical principles regulating research with animals.
- Submitting a research proposal to OPBA (Organismo Preposto al Benessere degli Animali, the Body for Animal Welfare; 2 hours): the lecture will provide indications on how to complete the forms required to submit a request to the UniTN OPBA.

Lecturers: C. Bonfiglioli, P. Sgadò

Code of conduct in science (COMPULSORY)

The lecture aims to raise Student awareness about misconduct in science. **Lecturer:** S. Pighin

3 – PARTICIPATE IN THE LIFE OF YOUR INSTITUTION

Colloquia Attendance (COMPULSORY)

Colloquia at CIMEC are talks given by prominent invited researchers in the mind/brain sciences. Students have the opportunity to meet the speakers of CIMEC-organized Colloquia personally during their visit and are invited to do so by contacting the Colloquium Host prior to their arrival/talk. Of the 6 Colloquia offered throughout the year, PhD students must attend at least 4 of them and keep track of the Colloquia attended in PhDigital.

Colloquium Academic Coordinator: M. Wurm, Colloquium PhDS Committee: E. Gessa, V. Rubino, L. Vavassori

CIMEC Seminar Attendance (COMPULSORY)

CIMEC Seminars are the CIMEC researchers' bi-weekly meeting to get to know what's going on at the Center. All CIMEC Principle Investigators, Postdocs, PhD Students, and MSc Students are strongly encouraged to attend them. The talks are aimed at a broad audience and address fundamental questions, problems, theories, or ideas in the mind/brain sciences.

Doctoral Student Day (COMPULSORY)

Doctoral Student Day is an opportunity for the CIMEC PhD Students to organize a day of talks and poster sessions in order to present their work to the CIMEC, enabling you to receive feedback from researchers you normally do not interact with, and to promote dialogue among researchers from the different fields represented in our Program. Best poster/talk prize, pending budget. *Faculty Contact: L. Turella*

Participation within the scientific community / public engagement (COMPULSORY)

CIMEC PhD Students are part of both a scientific and public community. As such, voluntary and proactive participation in the Center's activities is considered key in becoming a researcher. Participation within the scientific community and public engagement can be intended as, but not limited to, the following: assisting and organizing lab tours, DS Day organization, CIMEC event planning, Researchers' Night, Orientation/Open Days, cross-lab journal clubs, assisting visiting professors, etc. Find ways to participate in your scientific community and to build a gap between science and society in the designated sections of the CIMEC Wiki Pages. *Contact: L. Mercanti*

Note: sitting in on exams and teaching in general is not considered Participation.

Third mission & Open Science (COMPULSORY)

The 6-hr course aims to equip participants with a basic understanding of the Third Mission and Open Science principles, emphasizing their goals of promoting the valorisation and application of knowledge to foster social, cultural, and economic development. Participants will explore why PhD students should be engaged with the Third Mission and Open Science, and learn about various activities and strategies to effectively transfer knowledge to society, ensuring the sustainability of their research efforts.

Course Aim: The primary goal of this course is to provide students with a practical framework that enables them to enhance their PhD activities in alignment with Third Mission and Open Science principles. Students will learn how to incorporate these concepts into their portfolios, thereby advancing their careers and contributing to societal development.

Evaluation: Students will be assessed through a written project, either individually or in groups. This project will require students to propose an idea and outline a plan for implementing Third Mission and Open Science initiatives throughout their specific PhD studies (topic). The project will be briefly presented in class and submitted to the course lecturers for evaluation.

Course Schedule: The course will be conducted during the third and fourth trimester.

Faculty: A. Dodich, C. Miniussi

4 – PHD RESEARCH ACTIVITY – INSTRUCTIONS (COMPULSORY)

Student/Supervisor Lab Meetings (Yr1-4)

Lab Meetings: This fundamental activity is characterized by regular meetings with your Supervisor and, if available, the lab/research group you belong to. Students are obliged to attend and actively participate in a research lab. These meetings may also include 'journal club' activities (Students present papers of interest) and research presentations by Students and researchers from the same lab about their work. The lab meetings have as primary objective to improve the PhD Students' independent study, problem-solving, research, reading and oral presentation under the supervision of researchers and professors. In addition, this provides an opportunity for Students to contribute to the intellectual climate of the program and the critical mass of researchers. It is normally expected that each Student takes the lead on at least one meeting per year by presenting their work or presenting an interesting article to their lab/Supervisor.

Doctoral Student Day Poster/Talk (Yr1-4)

The aims of the DS Day are the following: (1) give the opportunity to the PhD Students to organize their own event; (2) offer an opportunity for the DPC and CIMEC at large to view the work currently carried out by all PhD Students; (3) practice presentation and receive feedback on the PhD research project.

Research Plan (Yr1)

This assignment is to delineate your research objectives and action plan at the onset of your PhD.

Instructions: Briefly describe your main objectives for your research and how you intend to carry it out by covering **1) Scientific background, 2) Goal and planned experiments, 3) Methods, 4) Expected results and 5) References**. PhDigital sends an alert to the Student 1 month before the deadline, Student uploads it, then Supervisor either accepts it or rejects it, and OC members validate it. Students and Supervisor are encouraged to discuss this assignment prior to being uploaded in PhDigital.

Research Presentation (Yr 1)

All Students are required to be directly involved, in some capacity, in a research project in their first year. For this assignment, the Student prepares a brief report on Yr1, summarizing research activities carried out so far. The expectation is that by the end of the first year, the Student has a detailed plan, developed with the Supervisor, for his/her thesis work. In this end-of-year report, the Student should also briefly summarize the future directions of his/her research, by emphasizing 1) the rationale/significance of the proposed experiments, 2) the specific hypotheses that will be tested, 3) the specific approach/methods that will be used to test the hypotheses, and 4) necessary control experiments. If the Student has already collected preliminary data on the project (or other preliminary projects), he/she should also summarize these data in a subsequent section.

Instructions: Written independently (no revision from Supervisor or OC until the presentation), this is a slide-based presentation. PhDigital sends an alert to the Student 1 month before deadline, Student enters the presentation in PhDigital and organizes a meeting held within 2 weeks in order to discuss it with the OC.

Each OC member fills out the feedback form available on PhDigital and Student validates it only once each feedback form is filled out, within 2 weeks of the presentation.

Thesis project proposal (Yr 2)

Students give a presentation of the project to the OC who will then discuss the project and provide immediate, on-the-spot feedback. The purpose is to give the Student the opportunity to present the project publicly and for the OC to monitor the research activity being conducted.

Instructions: PhDigital sends an alert to the Student 2 months before deadline who will upload the presentation to PhDigital and organize the meeting (location, date and time), 1 month ahead of time. Duration: 40 minutes (talk + follow-up discussion with OC)

Each OC member fills out the feedback form available on PhDigital and Student validates it only once each feedback form is filled out, within 2 weeks of the presentation.

Critical Literature Review (Yr 2)

This assignment is intended to serve as a first draft of the introduction to the PhD Student's thesis in which Students write a Critical Literature Review (CLR) in their field of study. This will be evaluated by a qualified reviewer selected by both the Student and the Supervisor, among his/her OC or outside the OC prior written approval from the program Coordinator.

Instructions: The CLR should be at least 2,000 words in length (plus a complete reference list). Students may fulfill this assignment by publishing a CLR in an international journal. Student sends the CLR to the previously determined Reviewer and uploads it to PhDigital.

The reviewer's evaluation (written freestyle or even email) is uploaded to the Student's profile in PhDigital within 2 weeks from when the CLR is uploaded to PhDigital.

Thesis progress (Yr3) and results (Yr4) presentations

Students give this presentation to the OC who will then discuss the project and data and provide immediate feedback. The purpose is to give the Student the opportunity to present the project results in public and for the OC to monitor the research activity being conducted.

Instructions: PhDigital sends an alert to the PhDS 2 months before deadline, PhDS enters the presentation in PhDigital and organizes a meeting held within 2 weeks in order to discuss it with the OC. Duration: 1 hour (talk + follow-up discussion with OC).

The OC fills out the evaluation form available on PhDigital within 2 weeks of the presentations. Student the validates the feedback.

At least one under-review research/review paper or a paper in a pre-print format deposited in PsyArXiv or equivalent, or peer-reviewed conference proceeding (concerns cycles 38, 39 and 40, due any time before September of Yr4)

Students should hand in a copy of an under-review research/review paper or a paper in a pre-print format deposited in PsyArXiv or equivalent, or peer-reviewed conference proceeding in which they appear as first author or first co-author. Submissions should be to a peer-reviewed, international-level journal in the upper half of the ISI index (or to an otherwise approved journal).

In case the scientific product is a conference proceeding, it should have been presented at a conference has to be listed among the top 250 in Computer Science on the Microsoft Academic Search site OR the Students can prove that the conference has an acceptance rate below 40% (e.g., by forwarding an acceptance letter that reports this rate, or providing a link to a site stating the acceptance rate, etc.). The paper must have been accepted as a full oral-presentation paper at the main conference

(no short papers, demo papers, workshop papers, posters, etc.). The conference reviewing process is based on full paper submissions (as opposed to abstracts). The paper must have been accepted for publication in the proceedings (although it is not necessary that the paper already be published)

Instructions: All article submissions should be under review prior to DPC thesis review process approval (prior to or coinciding with thesis delivery). The submission needs to be uploaded to PhDigital by the deadline of the Thesis delivery. Ideally, the publication should be on the Student's thesis project, or at least related to it, and Students should have made a strong contribution to the paper.

Due date: when the PhDS submits the thesis to the DPC, **otherwise PhDS is not admitted to the thesis review process.**

CIMEC Seminars (Yrs 1 – 4)

CIMEC seminars are meetings of approximately one hour in length, programmed on a bi-weekly basis, in which individual PIs present their current research and research interests to the Center. It is strongly encouraged that single events do not only host the PI's presentations but also presentations from the members of the whole research groups including PhD students. The PhD's contribution should be presentations of around 15 minutes. The list of PIs also includes IIT and FBK researchers. PhD Students must give at least 1 CIMEC Seminar presentation throughout their doctorate and no later than end of June Yr4.

Thesis delivery (Yr 4)

Thesis delivery details (format, delivery methods and other practical information) will be announced by e-mail or made available on the wiki pages. In order to discuss the thesis in November, by June of Yr 4 thesis writing should be in its final stages.

5 – PRESENT and PUBLISH YOUR PROJECTS

Research communication 1 – Data visualization

This module will cover the importance of data visualization in science. After an historical introduction we will see (i) How to read and interpret graphs, charts and maps; (ii) How to choose the adequate data visualization in different contexts; (iii) How to avoid being fooled by data visualization. During the class, students will be asked to present some data (their own, or freely available) in at least two different visualization forms and to explain the advantages and disadvantages of each one. **Lecturer: S. Bracci**

Research communication 2 – Figures and posters

This module will cover several aspects related to poster design and presentation. We will consider the differences between posters and other forms of scientific communication (e.g., talks), analyze how to design a poster optimally considering all its subfield as well as the general "gestalt". Moreover, the course will prepare students on the delivery of a poster presentation. During the class, students will be asked to prepare a poster on a study of their choice (either their own data, or freely available ones) and briefly present it in front of their colleagues, receiving feedback about both the poster design and presentation. **Lecturer: R. Bottini**

Research Communication 3 – Conference presentations

This module will cover several aspects of conference presentation including: (i) Visual aids during conference presentation (slide aspect/structure; graphs and charts); (ii) Structure of the talk (talk outline, subparts, scope and depth); (iii) Speech (use of voice, emphasis, "live" demonstrations); (iv) Delivery

(delivery style; control of anxiety). During the class, students will be asked to prepare a short presentation of a study of their choice (either their own data, or freely available ones) and briefly present it in front of their colleagues, receiving feedback about all the aspects mentioned above. *Lecturer: R. Bottini*

Research Communication 4 – Writing and How to Respond to Reviewers

This module consists of four 3-hour lectures that cover the following materials. The first lecture gives an overview of the general structure of a scientific paper, dissecting and discussing the internal structure of all its parts (from the choice of journal to the acknowledgements section) and their connections, giving suggestions for the order in which they may be developed. The second lecture covers the issue of plagiarism in scientific writing, defining it, discussing its reasons and how serious it is, providing various examples and checks to avoid it. The third lecture discusses scientific publications that are alternatives to the standard research article. The fourth lecture overviews the process of responding to reviewers, providing suggestions and various examples. Throughout the module students will complete homework exercises that will be done, discussed and continued in class. One exercise will be to dissect a section of a publication into the components discussed in class, as a way to look for and detect the classical building blocks. Another exercise will be to write a hypothetical introduction of the student's thesis following the structure discussed in class. Each student will review and give feedback to one or two Introductions from other students. Literature suggestions for further reading will be given. The course does not cover language aspects, which are covered in the compulsory course "Academic Writing".

Lecturer: J. Jovicich

Research Communication 5 – How to Review a Journal Article

This module is designed to introduce students to the activity of peer review of a Journal Article. It will consist of 3 two-hour lectures during which we will discuss (i) what a peer review is and its role in the scientific flow (ii) how to perform peer review and the main challenges (iii) available guidelines, ethical and practical considerations. Throughout the module, lectures will be complemented by practical exercises performed individually or in groups. *Lecturer: A. Dodich*

6- ANALYZE YOUR STUDIES

Research Design (154148 – LM course: Cognitive Science)

The 3-credit course will provide a basic introduction to data handling and statistical programming, including: loading tabular data, constructing and evaluating distributions from those data, and conducting basic inferential statistical analysis. The course is part of the Master's in Cognitive Science. For details, course calendar and information please contact the Course Lecturer directly.

Lecturer: U. Hasson, M. Wurm

Introduction to Computer Programming (Matlab) (154136 – LM course: Cognitive Science)

The course introduces computer programming, focusing on those aspects that are most relevant to behavioral and neuroimaging studies in cognitive neuroscience. At the end of the course, the students should be able to master the computer language proposed. *Lecturer: S. Fairhall, M. Wurm*

Introduction to Computer Programming (Python) (154140 – LM course: Computational and theoretical modelling of language and cognition)

The course introduces computer programming, focusing on those aspects that are most relevant to text processing: regular expressions, text segmentation, and extraction of lexical and linguistic information from text, word embeddings. *Lecturer: P. Rota*

Python

This course starts by covering the basics of Python usage and builds up from there to some more advanced topics. The aim is to bring participants up to speed using Python to solve some of the problems faced daily in the lab. **Lecturer: L. Petrucco (IIT)**

7- TOWARDS THE FINISH LINE

Seminars for senior PhD Students

The University of Trento organizes training courses on specific aspects of the research work - in particular, to help the participants develop transferable skills and knowledge that will be useful to draw up and manage research projects and to help young researchers strengthen their skills and gain independence. Senior PhD students are encouraged to take at least 3 seminars offered over the course of their 4th year. Some examples: *Project writing: tips and tricks*, *PhD Thesis Deposit*, *Scientific publications*, *Crash Course on protection and valorization of Intellectual Property*.

For seminar dates and information, PhD student must visit and follow the Division's registration instructions <https://www.unitn.it/en/ricerca/109727/train-your-talent>

Lecturers: Research and Technology Transfer Support Division – University of Trento

8- ACHIEVING EXPERTISE (THE FOLLOWING COURSES WILL BE OFFERED FOR THE LAST TIME IN 2024/2025)

Introduction on the Methods courses: Organized to offer PhD Students an overview of the main investigative tools and methods used in cognitive neuroscience. The Program's faculty members will provide Students with the basic knowledge to design and analyze data of experiments conducted with different techniques, ranging from fMRI to computational statistics. Students will be evaluated at the end of each module.

EEG

Description: The course will cover basic aspects of EEG experimental design, data recording (filtering, reference, sampling rate) and data analysis (pre-processing, ERP extraction, EEG oscillations) in cognitive neuroscience.

Aim: To provide the Students with a basic, practical knowledge on how to plan and run an EEG experiment.

Evaluation method and timeline: Written essay to be handed in to the lecturer. The course will take place in the first and second trimesters (February-March). **Lecturer: V. Mazza**

MEG

Description: The objective of this module is to provide the basic principles of MEG research, covering aspects of experimental design, data recording, data preprocessing (filtering, artifact removal) and advanced data analyses (Event-related fields, source reconstruction, signal processing tools, neural oscillations and synchrony).

Aim: To provide the Students with a basic, practical knowledge on how to independently plan and run an MEG experiment.

Evaluation method and timeline: Written essay to be handed in to the lecturer. **Lecturer: D. Baldauf**

fMRI

Description: This course offers a brief introduction to functional brain magnetic resonance imaging as a tool to quantitatively characterize brain function and structure.

Aim: After the three lectures Students should be able to understand the basic concepts for the following topics:

- * Advantages and disadvantages of fMRI relative to other neuroimaging methods
- * Signal origin & safety issues
- * Structural images: contrast & important parameters, sequences & limitations, analyses
- * Functional images: contrast & important parameters, sequences & limitations, analyses

Evaluation method and timeline: Written open questions, within a month of course's end. **Lecturer: J. Jovicich**

TBS/TMS

Description: The course will provide participants with knowledge on the use of transcranial magnetic stimulation (TMS) and transcranial electrical stimulation (tES) in the neuroscience field. The basic physical and physiological principles of TMS and tES are introduced as well as a range of cognitive applications. A special focus will be put on multimodal combinations of TMS and tES with electroencephalograph (EEG-TMS, tES-EEG). Aim: To provide the Students with a basic, practical knowledge on how to plan and run a transcranial brain stimulation experiment. Evaluation method and timeline: Practical activity will be carried out during the course. The course will take place in the second or third trimester. **Lecturer: C. Miniussi**

ACN - Animal Cognition and Comparative Neuroscience

The course will cover basic aspects of behavioural neurobiology experimental design, data recording and data analysis. Aim: To provide the Students with a basic, practical knowledge on some of the methods of behavioural neurobiology. Evaluation method and timeline: Written essay to be handed in to the lecturer. **Lecturers: P. Sgadò / U. Mayer**

Source connectivity with MEG/EEG signals

The course covers forward and inverse solutions for EEG-MEG in their basic theoretical form and as implemented in the toolbox Fieldtrip. It also shows how to perform connectivity at source level on a cortical mesh.

Aim: To provide the students with a basic, practical knowledge on possible pipelines for source connectivity. Evaluation method and timeline: Written essay to be handed in to the lecturer. **Lecturer: P. Belardinelli**

Neuroanatomy

Description: This course covers the basic aspects of embryology and anatomy of the central nervous system, with specific emphasis on radiological anatomy.

Aim: Students should acquire the competences to identify single cortical and subcortical structures while navigating in the radiological space. **Lecturer: L. Cattaneo**

Teaching assistance

As an integral part of the training program, and subject to the approval of the Executive Committee, Students can carry out the following duties:

- a) **not for credit:** paid or informal/unpaid Supervising / Teaching students in undergraduate and master's degrees at the University of Trento (unlimited);
- b) **for credit:** supplementary teaching activities (class supervision, teaching assistance during hands-on activities) up to a maximum of 40 hours for each year of the PhD. The recognition of these hours is equivalent to the amount of preparation time including frontal time. In case they are carried out in actual lessons, then the 40 hours correspond to 5 lessons: i.e., 8 hours of preparation time, 2 hours of lesson delivery)
- c) **Co-teaching** (in presence with course lecturer) of a theory course: counts as half the hours of Teaching Assistance: ie., 4 hours of co-teaching will amount to 2 of Teaching Assistance in PhDigital.

5.THESIS DELIVERY DEADLINE OPTIONS

37th Cycle											
Dates											
Start of PhD	01/11/2021	Earliest possible Thesis Discussion	Latest possible Thesis Discussion								
	31/10/2025	FE Session I & II (Nov)	FE Session III & IV (May)								
End of PhD				Note 1		Note 2				Note 3	
				Y4 - 2025	Sep-25	Oct-25	Nov-25	Dec-24	Jan-25	Feb-25	Mar-25
				FE request			FE Session I & II				Apr-25
											May-25
											FE Session III & IV
Thesis delivered to supervisor (approximate date)		31/08/2025									
DPC approval (approximate date)		10/09/2025									
Thesis delivered to reviewers (approximate date)		20/09/2025									
On-time 37th cycle PhD students will discuss their thesis in November 2025, or at the very latest within the first 2 weeks of December 2025											
37th cycle PhD students who cannot deliver their thesis to the Reviewers by September 2025 are expected to discuss their thesis at the latest between 01/05 and 31/05/26 (Session III & IV) *											
37th cycle PhD students may request an extension of their PhD by mid-September 2025 for a maximum of 12 months (ending 31/10/2026).											
Abbreviations: PhDs = PhD students FE = Final Exam, 25=2025, 26=2026											
Notes:											
Note 1 The PhD student must present request to be admitted to the final exam or for an extension between mid-May and Mid-September of their last year. See UNITN Regulations for PhDs: Art. 29.1											
Note 2 The FE must take place within 6 months from the end of the last year of the regular course. The thesis must be sent to Reviewers 2.5 months before the FE. This is to incorporate the reviewing time (1 month) plus minimal time for any minor review (2-3 weeks) plus delivery of reviewed and final thesis to FE committee (2 weeks before FE). Major reviews may take up to 6 months from receipt of review requesting the major review.											
Note 3 Latest possible timeframe to be able to discuss thesis without an extension: May for PhDs who finish in October 2025. Attention! This option is not possible if a major revision is necessary!											
Note 4 Students have the right for an extension for up to 12 months after their PhD, at 6 month intervals. Given that this is a 4Yr PhD, extensions are possible but highly discouraged. For more details see Art. 29, comma 6 and 7 of the University PhD regulations.											
Note 5 Specific guidelines for thesis delivery, along with dates and actions for Supervisors and PhD students are sent out 2 months prior to thesis delivery to Reviewers (July for November discussants, January for May discussants)											

6. EVALUATIONS

Evaluations are necessary to maintain the health and quality of the PhD program. Whenever requested, they are to be carried out by the Supervisor, the PhD Student, and OC members independently in order to ensure minimum requirements are met regarding the quantity and quality of the research and educational objectives. The outcome of the evaluations is monitored by the EYE-C, Administration, and with regards to research activity, by the OC. Ultimately a yearly report of the evaluations is sent to the University of Trento's Evaluation Group (*Nucleo di Valutazione*).

Currently there are 3 types of evaluations sent to the PhD students:

- End Year Supervisor, OC and Mentor
- Individual PhD Courses (anonymous)
- End Year General PhD Program (anonymous)

7. CODE OF CONDUCT

Honesty in Computer and Other Equipment Use

Theft, damage or misuse of the equipment is forbidden as it takes advantage of all the other users who will lose the use of the resources. Allowing unauthorized non-CBS Doctoral Program people access to the equipment is strictly prohibited as it reduces the amount of equipment available for CBS users and may lead to thefts. Network usage concerning downloading of material and files and placing material on the web must be restricted to work-related items. In particular, CBS computers should not be used for downloading media files from websites that encourage copyright infringement.

Use of Facilities

The Doctoral Program offers a number of facilities to the Students, such as telephone and printer usage and internet access; these services must be used only for work related activities and not for personal purposes. Moreover, their usage is restricted to Students, who should not invite external people to use CBS services. All data collected from your experiments should be saved on the UNITN computers, which are backed-up on a routine basis.

Workspace

Students are expected to be quiet and respectful of others in the shared workspace. The workspace is shared by several people and so it is necessary to let everybody do his/her work quietly and with the needed concentration. The workspace, as well as the use of shared facilities, is a privilege which is based on courtesy, respect for one's neighbours, and common sense. If the behavior of the Student interferes with his/her colleagues, then the privilege of CBS-provided workspace may be revoked.

Tests/Assignments

If there is any confusion concerning the tests/assignments, it is your responsibility as a Student to seek clarification from the lecturers. Violating an exam policy takes unfair advantage of other Students in the class and compromises the trust of the instructor.

Papers and Reports

Students are required to produce reports and research papers during their careers at the University. In collecting data and information, Students need to actively avoid plagiarizing the work of others. Proper footnoting of source material and documentation of borrowed ideas are absolutely essential. Texts reproduced from any other document (published paper, webpage, etc...) must be clearly cited as the work of others.

Affiliations and Acknowledgements

When presenting a paper, a poster, or a talk you must acknowledge CIMEC in your affiliations. If you are funded by a UniTN fellowship, then CIMEC must be the primary affiliation as well as the UNITN's PhD program sponsors: the Autonomous Province of Trento, the Fondazione Cassa di Risparmio di Trento e Rovereto and the Municipality of Trento. If you are funded by external grants (e.g., from IIT or FBK), you must still acknowledge CIMEC as your secondary affiliation.

Communications

It is the responsibility of PhD Students to receive and answer to the messages sent to their "UNITN" e-mail address within a reasonable time frame, independently of the place they are.

Violations of to the Codes of Conduct are a serious matter. Consequences can range from a disciplinary note from the Executive Committee to expulsion by the Doctoral Program Committee.

8. STUDENT HONOR CODE

The objective of the Doctoral Program is to provide Students with a high-quality education and prepare them for research careers in academia or industry. A core aspect of scientific work is maintaining scientific integrity, first as a Student, and later as a researcher. In science and academia, scientific misconduct harms the entire community and may even set back scientific work in extreme cases such as data fabrication. It is with this in mind that we have set forth our ethical code: an Honor Code at the Cognitive and Brain Sciences Doctoral Program that is meant to guide you through your responsibilities as Students and practicing scientists. The Honor Code provides guidance and information regarding the expectations of Students and staff in our Doctoral Program and complements, but does not replace, the University of Trento ethics regulations¹.

The Honor Code at the CBS Doctoral Program aims at cultivating a community based on trust, academic integrity and honor. It specifically aims at accomplishing the following:

- ensure that Students, faculty and administrators understand that the responsibility for upholding academic honesty at CBS Doctoral Program lies with them;
- prevent Students from gaining an unfair advantage over others through academic misconduct;
- ensure that Students understand that academic dishonesty is a violation of trust: the trust of the academic and non-academic community in the results, and, ultimately, of the tax-payers who fund our research;
- cultivate an environment at the CBS Doctoral Program where academic dishonesty is not tolerated among the Students.

1. Honesty

Honesty with others and the CBS Doctoral Program in regard to both academic and non-academic issues is fundamental in creating and maintaining a good environment at the CBS Doctoral Program. The standard that should guide the Students is whether their conduct is morally just.

2. Lying, Deception, and Fraud

Any attempt to gain an advantage or to avoid a consequence by lying, deception or fraud is not acceptable behavior at the CBS Doctoral Program.

Examples of lying, deception, and fraud include falsifying records of time and attendance at work, providing false information to a CBS Doctoral Program official, and failing to take responsibility for personal conduct.

3. Scientific misconduct: Plagiarism / Fabrication / Falsification

Scientific misconduct will not be tolerated and can lead to expulsion from the program.

Plagiarism: The way in which Students communicate their ideas reflects their writing and analytic ability. For this reason, Students are expected to communicate their ideas using their own phrasings, and attribute any prior ideas or language to their source. Verbatim citations from written or online resources should be enclosed in quotation marks and accompanied by an accurate citation. Do not make minor changes or word substitutions to prior written work in an attempt to avoid citing it. If you are unclear on how to cite a particular resource, consult your faculty Supervisor or use the American Psychological Association format.

Copying text from your own prior work (or your Supervisor's) is considered self-plagiarism. Although often considered less blameworthy than other forms of plagiarism, self-plagiarism is nonetheless a form of scientific misconduct.

You should cite any prior source that directly influences your scientific treatment of the topic in question. This includes research design, code, analytic strategies or more general ideas. Failing to cite or properly attribute ideas to their source results in a misrepresentation of the Student's intellectual or writing ability. When citing

¹ <http://www.unitn.it/norme-regolamenti/2099/codice-etico-e-codice-di-comportamento> (Italian only)

primary sources based on reading of secondary sources such as chapters or review articles, you should make clear that the primary materials were not directly evaluated.

Fabrication and Falsification. Data fabrication involves any form of creating data sets or adding data to existing ones. This is an extreme form of scientific misconduct and will not be tolerated. “Findings” reported from fabricated data cannot be replicated and result in wasted time and resources within the scientific community. Data falsification is any attempt to alter existing data including modifications of means or variances. Students should not invent, alter or delete data collected. Students must maintain records of all original data and share them with their Supervisor. Procedures for data filtering (e.g., outlier removal or discarding participants) should be consulted on and approved by the faculty Supervisor. In particular “P-hacking” should be avoided: null results are a frequent outcome in scientific studies, and Students should not aim to analyse their data to the point they obtain a “significant” ($p < .05$) result. Similarly, when multiple analysis strategies exist, whether or not a strategy results in a significant result should not be considered a factor in selection of an analysis to report. Students should consider reporting null or statistically marginal findings, as they are essential to future meta-analyses and for the assessment of the research project as a whole. While you are responsible for your work, you should consult with your Supervisor on such issues; they are the ones bearing the final responsibility for the communicated work and have the last word on these.

Any misrepresentation of others’ work as if it was the Student’s own (i.e., plagiarism) or instances of data fabrication or manipulation will be referred to the Executive Committee for disciplinary action.

4. Discrimination, sexual harassment and other inappropriate behavior

Discrimination, sexual harassment and other inappropriate behavior, as deemed such by the Doctoral Program Committee, is contrary to the University's ethical regulations and is considered as a violation. Serious violations will be reported to the police. Should you feel you are a victim of any inappropriate behaviour, you can contact the Confidential Counsellor (Consigliera di Fiducia), a lawyer appointed by UniTN to offer counselling to manage issues of discrimination, mobbing or sexual harassment within the work environment.
<https://www.unitn.it/en/servizi/1716/the-universitys-confidential-counsellor-for-cases-of-mobbing-harassment-discrimination>

Consigliera di Fiducia

tel. +39 0461 281295

Consiglieradifiducia@unitn.it

5. Respect Others

Every person has a fundamental right to be treated with respect. Every member of the CBS Doctoral Program is expected to treat others in a way that will foster to the well-being of everyone at the CBS Doctoral Program and in the community. Advancing in the PhD program via scientific misconduct (as described in section 3) is ethically wrong and also results in a skewed allocation of resource (extension, prizes etc.) and harms one’s peers. For this reason, if you know of any of the school’s Student who engages in misconduct you should consider raising this issue with them.

6. Disciplinary Measures

Serious violations will be treated as follows:

The Students and his/her Supervisor will be asked for an explanation of the events by the Executive Committee. The Executive Committee decides whether or not to admonish the Student or to refer the case to the Doctoral School Committee recommending expulsion.

The Doctoral School Committee reserves the right to expel a Student, even immediately.

