



UNIVERSITÀ DEGLI STUDI
DI TRENTO

CIMeC - Center for Mind/Brain Sciences

CiMeC

DOCTORAL PROGRAM IN COGNITIVE AND BRAIN SCIENCES

2023-2024 STUDENT HANDBOOK

Approved by the Doctorate Program Committee on 26 October, 2023

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

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. Make sure to have the most recent and updated version which you can also download from the CIMeC [“PhD Resources”](#) wiki section.

Read this document **carefully** and do not hesitate to contact the PhD administrator should you have any questions.

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

Lorella Battelli (IIT), Paolo Belardinelli, Raffaella Bernardi, Roberto Bottini, Yuri Bozzi, Stefania Bracci, Alfonso Caramazza, Luigi Cattaneo, 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, Roberto Zamparelli, Massimiliano Zampini

Additional Faculty and Supervisors

Daniel Baldauf, Claudia Bonfiglioli, Corrado Corradi Dell'Acqua, Giuliano Iurilli (IIT), Simona Monaco, Stefano Panzeri, Federico Rossi (IIT), Paola Sgadò

Doctorate Program Administrator

Leah Mercanti

Student Representatives

- 38th and 39th cycle: TBD
- 36th and 37th cycle: Laura Battistel
- (outgoing) 35th cycle: Alexandria Holcomb (PhD Student CIMeC Consiglio representative)

Current PhD Students (PhDS)

39th cycle (Year 1)	38th cycle (Year 2)	37th cycle (Year 3)	36th cycle (Year 4)	35th cycle (Covid/Other) Extension
Alessandra Barbon	Valeria Bedin	Martina Amerighi	Alice Adiletta	Dalila Albergo
Marisa Monika Amalie Birk	Luca Betteto	Laura Battistel	Elena Eccher	Gabriele Amorosino
Yadunandan Edayadathodi	Matteo De Matola	Andrea Belluzzi	Giulia Funghi	Sabrina Beber
Chiara Fornari	Silvia Gini	Davide Cortinovis	Jayro Martinez Cervero	Natasha Bertelsen
Greta Gaimarri	Alessandra Gobbo	Alexander Charles Leslie Eperon	Filippo Michelin	Cristina Cara
Paolo Ghin	Davide Mazzaccara	Elena Gessa	Sia Vosh Sepanta	Giuliano Giari
Giulia Mazzi	Elisa Pasquini	Elena Giovanelli		Alexandria Holcomb
Cristina Pagliara	Debora Spagnolo	Yasaman Heydari		Alireza Karami
Dario Pesenti	Marco Tagliaferri	Martina Mancano		David Sastre Yague
Valerio Rubino		Chiara Pepe		Federica Sigismondi
Ines Severino		Matilde Perrino		Alexia Stuefer
Heather Nicole Strelevitz		Enrica Pierotti		
Roberta Vertullo		Chiara Riccardi		
		Samantha Sartin		
		Michele Tosi		
		Le Minh Nhut Truong		
		Laura Vavassori		

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: Within the month of December Yr1, upon consulting with your Supervisor and checking 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 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, if needed. 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. 14 of the Doctoral Regulations of the University of Trento and is summoned approximately between 4 and 7 (or when necessary) times a year.

EXECUTIVE COMMITTEE (EC)

The Executive Committee assists the Director of the Program in fulfilling his or her duties under Art. 15 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 8 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 enrolment 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

Beginning in 2021-2022, the Doctorate in Cognitive and Brain Sciences began using an online PhD organization tool called “PhDigital” (url: phdigital.cimec.unitn.it). Most of your PhD tasks, deadlines and reports are managed via this tool. You are encouraged to continuously log your activity 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 Mentor receive alerts in their email box prompting them to enter PhDigital in order to complete their upcoming deadlines. (For the 36th cycle students this tool replaces the PhD’s Gdrive folders that were used before 2021-2022 but the files in these folders are not transferred to PhDigital).

To assist you with 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.

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 2023-2024 are as follows:

<u>2023</u>	<u>2024</u>
Nov. 1	Jan. 1
Dec. 8, 25-26	Apr. 1, 25-26
	May 1
	June 26 (only Mattarello)
	Aug. 5 (only Rovereto), 15-16

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 2023/24 DEADLINE CHECKLIST

YEAR 1 – Cycle 39		Due date
Study plan		
<input type="checkbox"/>	Proposed	10/01/2024
<input type="checkbox"/>	Final	12/09/2024
Research project		
<input type="checkbox"/>	Research plan	10/01/2024
<input type="checkbox"/>	Research plan approval	15/01/2024
<input type="checkbox"/>	Doctoral Student Day poster	31/01/2024
<input type="checkbox"/>	YR1 research presentation	15/09/2024
<input type="checkbox"/>	YR1 research presentation feedback by the Oversight Committee	25/09/2024
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab / Supervisor meetings	05/10/2024
<input type="checkbox"/>	Log of attended Colloquia	05/10/2024
<input type="checkbox"/>	Log of attended CIMeC Seminars	05/10/2024
<input type="checkbox"/>	Log of participation and public engagement activities	05/10/2024
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS	05/10/2024
YEAR 2 – Cycle 38		Due date
Study plan		
<input type="checkbox"/>	Proposed	30/11/2023
<input type="checkbox"/>	Final	12/09/2024
Research project		
<input type="checkbox"/>	YR2 project proposal presentation	15/09/2024
<input type="checkbox"/>	YR2 project proposal feedback by the Oversight Committee	25/09/2024
Assignments		
<input type="checkbox"/>	Critical Literature Review (CLR)	15/09/2024
<input type="checkbox"/>	Critical Literature Review (CLR) feedback by the Oversight Committee	25/09/2024
<input type="checkbox"/>	Doctoral Student Day poster/talk	31/01/2024
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab / Supervisor meetings	05/10/2024
<input type="checkbox"/>	Log of attended Colloquia	05/10/2024
<input type="checkbox"/>	Log of attended CIMeC Seminars	05/10/2024
<input type="checkbox"/>	Log of participation and public engagement	05/10/2024
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS	05/10/2024

YEAR 3 - Cycle 37		Due date
Study plan		
<input type="checkbox"/>	Proposed	30/11/2024
<input type="checkbox"/>	Final	12/09/2024
Research project		
<input type="checkbox"/>	YR3 project progress presentation	15/09/2024
<input type="checkbox"/>	YR3 Year project progress feedback by the Oversight Committee	25/09/2024
Assignments		
<input type="checkbox"/>	Doctoral Student Day poster/talk	31/01/2024
<input type="checkbox"/>	Research paper for journal or conference proceeding, with reviews	31/07/2024
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab / Supervisor meetings	05/10/2024
<input type="checkbox"/>	Log of attended Colloquia	05/10/2024
<input type="checkbox"/>	Log of attended CIMeC Seminars	05/10/2024
<input type="checkbox"/>	Log of participation and public engagement activities	05/10/2024
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS	05/10/2024

YEAR 4 - Cycle 36		Due date
Research project		
<input type="checkbox"/>	YR4 project results presentation	01/07/2024 (if thesis discussion in November), otherwise 15/09/2023.
<input type="checkbox"/>	YR4 project results feedback by the Oversight Committee	10/07/2024 (if thesis discussion in November), otherwise 15/09/2023.
Assignments		
<input type="checkbox"/>	Doctoral Student Day poster/talk	31/01/2024
<input type="checkbox"/>	Thesis abstract	15/09/2024*
<input type="checkbox"/>	Thesis delivery	15/09/2024*
<input type="checkbox"/>	CIMeC Seminar presentation	30/06/2024
Participating in the life of your institution		
<input type="checkbox"/>	Log of Lab/Supervisor meetings	01/09/2024 (if thesis discussion in November), otherwise 05/10/2024
<input type="checkbox"/>	Log of Colloquia attended	01/09/2024 (if thesis discussion in November), otherwise 05/10/2024
<input type="checkbox"/>	Log of CIMeC Seminars attended	01/09/2024 (if thesis discussion in November), otherwise 05/10/2024
<input type="checkbox"/>	Log of participation and public engagement activities	01/09/2024 (if thesis discussion in November), otherwise 05/10/2024
<input type="checkbox"/>	Profiles and publications update on Digital University and IRIS	01/09/2024 (if thesis discussion in November), otherwise 05/10/2024

*depending on your specific situation please refer to final exam chart on pg. 24

3.2 PHD PROGRAM GANTT DIAGRAMS BASED ON YEAR OF ENROLMENT

YEAR 1 - 39th 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											DUE	
Activity log entries in PhDigital												DUE
Yr1 research presentation with OC												At least one meeting in this time frame
CIMeC Seminar presentation						By June of YR4						
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												
YEAR 2 - 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											DUE	
Activity log entries in PhDigital												DUE
Yr2 project proposal presentation with OC												At least one meeting in this time frame
Yr2 project proposal presentation with OC												At least one meeting in this time frame
CIMeC Seminar presentation						By June of YR4						
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												
YEAR 3 - 37th cycle	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Proposed Study Plan												
Doctoral Student Day poster/talk												
Research Paper/Conference Proceeding												
Update Digital University profile and publications in IRIS											DUE	
Activity log entries in PhDigital												DUE
CIMeC Seminar presentation												By June of YR4
Yr3 project progress presentation												At least one meeting in this time frame
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												
YEAR 4 - 36th cycle	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Doctoral Student Day poster/talk												
CIMeC Seminar presentation												By June of YR4
YR4 project results presentation												
OC Feedback: YR4 project results												
Update Digital University profile and publications in IRIS											DUE	
Activity log entries in PhDigital												DUE
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 is based on:

- your performance in developing your thesis project and presenting it on the deadline dictated by the School,
- completing the PhD program's assignments (including course assignments) in due time,
- passing the mandatory and elective courses in your study plan,
- your self-reported and minimum requirement attendance at CIMeC Colloquia, CIMeC Seminars and other seminars, Supervisor/Lab meetings and general activities,
- participation and 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: at the beginning of the 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, especially in the first two years of the PhD. Some of the activities and courses are mandatory, whereas electives constitute an opportunity for further training. Nevertheless, **electives must make up at least 10 credits in your study plan, taken within the first two years**. Apart from its own courses, the Doctorate Program encourages the student to check out the educational offerings throughout the University in order to fulfill elective courses. Non-doctorate in Cognitive and Brain Courses – "External courses" - are not listed in PhDigital and can be taken all year round, prior Supervisor and Executive Committee approval. Courses offered by the PhD program may run until the end of July.

Instructions on filling out your Study Plan are in PhDigital and in the email alert you receive to enter your courses in PhDigital. Either way, the study plan can be filled out and modified only during specific periods of the year. 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 mandatory. For each course, regardless of it being compulsory or not, a student is allowed up to 25% absences. Where applicable, the student should indicate their absence for work-related reasons (such as conference travel) 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 it up.

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 an evaluation is Sept. 10 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 and final study plan and pass/fail status or certifications by Lecturer must be **uploaded in the PhDigital by 10 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

T=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	T	2
Being a PhDS at CIMeC	YR4 Students	YR1	T	2
Time Management	A. Dodich	YR1	T	2
YR1 Doctorate Review	M. Turatto, L. Mercanti	End of YR1	T	1
Programming*	External or at UNITrento	YR1 or YR2	T	24
Academic writing*	CLA lecturers	YR 2	T	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) or Teaching Assistance for an equivalent amount of hours (see pg. 23 for details).

2- ETHICS AND GOOD PRACTICE OF RESEARCH

Course	Lecturer	When	Type	Hours
Ethics of research in Neuroscience				
Human track	C. Bonfiglioli	YR1	T	8
Animal track	C. Bonfiglioli + E. Lorenzi	YR1	T	8
Code of conduct in science	S. Pighin	YR1	T	4

3- PARTICIPATE IN THE LIFE OF YOUR INSTITUTION

Course	Reference	When	Type	Hours
Colloquia / Attendance	M. Wurm + CCC / Invited speakers	Each year	T	3 / 21
CIMeC Seminar / Attendance	Phd Students	Each year	R	12
Doctoral Student Day	L. Turella / Phd Students	Each year	T	6 / 8
Participation / Public engagement	L. Mercanti	Each year	T	NA
Third mission	C. Miniussi	YR1	T	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	Yr3-4 for cycles 36+37
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
CIMeC Seminar Presentation	PhDS	Year 1 and 2 Year 3 and 4	R	12 6	1-4
Research project presentation	PhDS	Each year	R	36	Yr1
Thesis	PhDS	YR4	R	240	Yr4

4.2 ELECTIVE CREDITS

5- RESEARCH COMMUNICATION

Course	Lecturer	When	Type	Hours
RC1				
Data visualization	S. Bracci	YR1 or YR2	T	6
RC2				
Figures and posters	R. Bottini	YR1 or YR2	T	9
RC3				
Conference presentations	R. Bottini	YR1 or YR2	T	12
RC4				
Writing, How to Respond to Reviewers	J. Jovicich	YR1 or YR2 (preferred)	T	12
RC5				
How to Review a Journal Article	A. Dodich	YR1 or YR2	T	6

6- 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	T	vary

7- ANALYZE YOUR STUDIES

Course	Lecturer	When	Type	Hours
Research Design (154148 – LM course: Cognitive Science)	U. Hasson/M. Wurm	YR1 or YR2	T	21
Introduction to Computer Programming (Matlab) (154136 – LM course: Cognitive Science)	S. Fairhall/M. Wurm	YR1 or YR2	T	42
Introduction to Computer Programming (Python) 154140 – LM course: Computational and theoretical modelling of language and cognition)	P. Rota	YR1 or YR2	T	42
Python	L. Petrucco	YR1 or YR2	T	32

8- ACHIEVING EXPERTISE

Course	Lecturer	When	Type	Hours
Introduction to Methods				
Methods 1: EEG	V. Mazza	YR1 or YR2	T	15
Methods 2: fMRI	J. Jovicich	YR1 or YR2	T	12
Methods 3: MEG	D. Baldauf	YR1 or YR2	T	9
Methods 4: TBS	C. Miniussi	YR1 or YR2	T	12
Methods 5: ACN	P. Sgadò – U. Mayer	YR1 or YR2	T	9
Source connectivity with MEG/EEG signals	P. Belardinelli	YR1 or YR2	T	12
Other skills				
Neuroanatomy	L. Cattaneo	YR1 or YR2	T	6
Open Science	C. Miniussi	YR1 or YR2	T	6
Teaching Assistance (see details for Teaching Assistance pg. 23)	PhDS	All years	T	40 max.

9- 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 mandatory for all UNITN personnel. Until you pass these courses you cannot have access to the CIMEC labs.

For **Laurea Magistrale in Cognitive Science Courses** please check out:
<https://offertaformativa.unitn.it/en/lm/cognitive-science/courses-timetable-exams>

4.3 COURSE AND ASSIGNMENT DESCRIPTIONS

1 – MANAGE, MONITOR AND WRITE YOUR PROJECTS

Make the most of your PhD

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

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, E. Lorenzi

Code of conduct in science

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

3 – PARTICIPATE IN THE LIFE OF YOUR INSTITUTION

Colloquia Attendance

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. PhD Students must keep track of the Colloquia attended throughout the year or will not be admitted to the following year. Colloquia include those seminars organized by the Program as well as outside the University of Trento network. *Colloquium Academic Coordinator: M. Wurm, Colloquium PhDS Committee: M. De Matola, D. Mazzaccara, E. Pasquini*

CIMeC Seminar Attendance

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

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

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 for PhD students

The course provides participants with knowledge on the basic aspect of the third mission and its goal, that is promoting the direct application, valorization and use of knowledge to contribute to the social, cultural and economic development of society. Moreover the "why a PhD should be interested in the third mission" will be discussed. Finally, an array of activities/actions to ensure the transfer knowledge to society will be presented.

Aim: to provide the Students with a basic practical framework that can be used to give value to the PhD activity in respect to the third mission.

Evaluation: written personal or group project, to be handed to the lecturer, reporting an idea and a plan on how to carry out a third mission action over the PhD course. The course will take place in the third or fourth trimester. *Faculty C. Miniussi*

4 – PHD RESEARCH ACTIVITY – INSTRUCTIONS

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 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. PhDigital sends an alert to the Student 1 month before 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 sees/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 1 month 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 sees/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 1 month 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.

Peer-reviewed research paper or peer-reviewed conference proceed (Yr 3, concerns cycles 36 and 37 only)

The aim is to encourage Students to disseminate their research in the wider scientific world. Students should hand in a copy of a research paper which has been submitted for publication in which they preferably appear as first 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 submitted to the journal in time to receive at least a preliminary peer review round prior to the deadline for this assignment. The submission and actual reviews need to be uploaded to PhDigital by the deadline. 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. **Alternatively, should Students be unable to meet the below deadline, a justification from the Student's Supervisor ought to be uploaded to PhDigital in its place.**

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 and 39 only, 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*

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/77172/train-your-talent>

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

8- ACHIEVING EXPERTISE

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**

Open Science

We scientists have recently become more aware that our work is affected — way more often than we think — by pitfalls that make our findings unreliable, e.g., difficult to replicate. Some of this unreliability is just intrinsic to

walking at the boundary of the unknown, like we do every day. Some of it, instead, is the product of questionable practices, often incentivized by the social system that governs science — academia.

Aim: to outline these practices at different levels from the individual researcher up to the institutional level and describe what procedures can be followed to avoid them and improve the credibility of scientific research.

Evaluation method and timeline: specific activity will be proposed, based on Student interest. The course will take place in the second or third trimester. *Lecturer: C. Miniussi*

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 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. Credits are equivalent to amount of preparation time including frontal time in the proportion of 6 (hrs)-to-1 (credit). 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)

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.

