

Central European University PhD Program in Cognitive Science

Program Regulations

Adopted by the Doctoral Program Committee

September 23, 2011

Amended December 13, 2016

Amended Oct 11, 2017

Amended Febr 13, 2018

Amended June 10, 2021

Last amended April 21, 2023

General outline of the program

Program's aim and learning outcome

The PhD program is one of the very few ones in the world explicitly dedicated to cognitive science. Cognitive science is the study of the ways in which information is acquired and used by humans, other living organisms, and also artificial cognitive systems. The program offers specialization in the fields of social cognition, cognitive development, and formal and biological models of perception and learning. Students may take courses in cognitive psychology, philosophy of mind, cognitive anthropology, visual perception and computational modeling. They receive practical research training in methods, experimental design and data analysis in the laboratories of departmental faculty members.

To attain the degree of PhD in Cognitive Science, students have to demonstrate their ability to lead an independent research program, which involves

- Up-to-date knowledge of research findings in the field
- Conceiving novel research questions whose answers would contribute to cognitive science
- Finding and employing appropriate research methods. This include, but is not restricted to, designing and running behavioral experiments.
- Mastery of data analysis techniques
- Writing research reports to peer-reviewed journals
- Presenting research to an academic audience

The program thus aims to train competent cognitive scientists with proven ability to contribute to the scientific knowledge of cognition.

The Department of Cognitive Science at CEU

The Department of Cognitive Science runs the doctoral program in cognitive science. The Department is responsible of the teaching and supervision of PhD students and for providing them with optimal working conditions (lab facilities, safe environment, etc.).

The Doctoral program is steered by the Doctoral Program Committee, which is constituted of all faculty members of the Department. The Doctoral Program Committee is headed jointly by the Head of Department, elected every three year by the faculty members of the Department, and the Doctoral Program Director, who is nominated among the faculty members by the Head of Department.

The Doctoral Program Committee meets regularly for current and extraordinary matters. The Student Representative, who is elected every year by the body of doctoral students, is invited to meetings to represent the interests of the students and give feedback related to the well-functioning of the program to the Committee.

Currently, the Department of Cognitive Science hosts three research centres with their experimental facilities and the Doctoral Program Committee includes ten faculty members.

Structure of the program and requirements

The doctoral program is highly tailored to individual student research projects, under supervision of a faculty member. It consists of a probationary period of one year (detailed in the next section), and a candidacy period of three years or more (detailed in section 3). During their time in the program, students must obtain 240 ECTS credits by completing three modules:

- **Coursework (32 ECTS):** students are requested to take several courses, which are usually worth 4 ECTS each. After a first term of coursework, PhD student are requested to dedicate the majority of their time and effort to their research project.
- **Academic activities (80 ECTS):** students are requested to actively participate to the academic life of the department and of their field of research. They are requested to attend the departmental weekly colloquium, and to participate to the research and journal clubs. They are requested to be Teaching Assistant for at least a course. They are also requested to participate to yearly departmental workshop, to international conferences and establish on their own a set of activities that can include further teaching, visiting new labs and contributions to collaborative research projects outside of their thesis.
- **Milestones (128 ECTS):** the main task of a doctoral student is to write a PhD thesis. The Milestones assess the progress made in order to achieve this goal. Milestones include writing an original and feasible research project, data gathering and writing of draft chapters.

The grading scheme of the department corresponds to that of CEU (see https://www.ceu.edu/sites/default/files/attachment/basic_page/22225/student-records-manual.pdf).

Probationary period

In their first year, between the date of enrollment and the successful passing of the Comprehensive Examination, students have the status of Probationary PhD Candidates. Probationary PhD Candidates have to reside in Vienna for the duration of the academic year, participate in the life of the department and earn the required number of credits.

First year coursework

Probationary PhD candidates have to attend three types of courses. Core courses and Research courses are mandatory, Elective courses can be selected from the offers of the Department of Cognitive Science, or from other departments with the permission of the Doctoral Program Committee.

Probationary PhD candidates have to attend regularly the Departmental Colloquia and the Journal/Research Clubs organized for students. 2 ECTS credits per term are awarded for attendance of each of these.

First year work with supervisor

The Doctoral Program Committee assigns an advisor to each student at the start of the first year. Fall term courses have to be selected with the agreement of the advisor. In case of disagreement, the Director of the Doctoral Program decides on the courses to be selected by the student. Students are expected to approach eligible faculty members of the department to discuss potential research topics, and should submit a request to the Doctoral Program Committee for a preferred supervisor by the end of the Fall term. The Doctoral Program Committee assigns a primary supervisor for each student before the start of the Winter term. The assignment of supervisors is subject to approval by the University Doctoral Committee.

Research Proposal

During the second term, probationary PhD candidates are required to write a research proposal of approximately 5,000 words with the help of their supervisor. The proposal will form the basis of the research to be performed during the doctoral studies. The proposal includes a preliminary hypothesis and the research question, description of the methodology or theoretical framework, and a two-year research plan. The proposal is to be defended at the Comprehensive Examination.

Summary of credits to be earned in the first year

Term	Module	Requirement	ECTS
Fall Term 20 ECTS	Coursework - 16 ECTS	Topics in Cognitive Science	4
	Students complete the mandatory Topics in Cognitive Science course for 4 ECTS. For the remaining 12 ECTS, students may either complete three research courses or two research courses and an elective course, each worth 4 ECTS.	Research Courses <ul style="list-style-type: none"> - Visual Cognition - Jozsef Fiser (4 ECTS) - Joint Action - Natalie Sebanz, Gunther Knoblich (4 ECTS) - Infant Cognition - Agnes M. Kovacs, Gergely Csibra, Gyorgy Gergely (4 ECTS) - Experimental Economics: documenting irrational choices and preferences - Christophe Heintz (4 ECTS) 	8
		Elective Courses (may be substituted with Research Courses). Example of courses offered in 2019-20: <ul style="list-style-type: none"> - Mental Files in Perspective: Implications for Folk Psychology - Josef Perner (4 ECTS) - Introduction to EEG methods in Cognitive Science - Gergely Csibra (4 ECTS) - Language from a developmental and comparative perspective - Agnes-Melinda Kovacs (4 ECTS) 	4
	Academic activities - 4 ECTS	Department Colloquium	2

	Students must complete both activities, earning 2 ECTS for each.	Journal Club/Research Club	2
Winter Term 20 ECTS	Coursework - 16 ECTS	Statistics for Experimental Research - Jozsef Fiser	4
	Students compete the mandatory Statistics for Experimental Research course for 4 ECTS. To earn the remaining 12 ECTS, students choose one elective course (4 ECTS) and complete an individual study course with their supervisor (8 ECTS).	Elective Courses. Example of courses offered in 2019-20: <ul style="list-style-type: none"> - How Minds Create Societies: An Evolutionary Psychology approach – Gyorgy Gergely (4 ECTS) - Cognition and Culture - Christophe Heintz and Vlad Naumescu (4 ECTS) - Bayesian Data Analysis - Jozsef Fiser (4 ECTS) - Social Neuroscience - Natalie Sebanz and Gunther Knoblich (4 ECTS) - Python for experimental scientists – Attila Krajcsi (4 ECTS) 	4
		Individual Study Course with the Supervisor	8
		Department Colloquium	2
	Academic activities - 4 ECTS Students must complete both activities, earning 2 ECTS for each.	Journal Club/Research Club	2
Spring Term 20 ECTS	Milestones - 16 ECTS	Comprehensive exam: written research proposal and oral presentation	16
	Academic activities - 4 ECTS Students must complete both activities, earning 2 ECTS for each.	CDC Seminar/Department Colloquium	2
		Journal Club/Research Club	2

The Grade Point Average (GPA) is calculated from the grades received for coursework during the first year. Students with a GPA lower than 3.33 cannot take the Comprehensive Examination, and their student status will be terminated. (Grade-to-point conversion methods are specified in the "Student Rights, Rules, and Academic Regulations" document.)

Comprehensive Examination

Probationary PhD candidates who completed their coursework, submitted their Research Proposal, and have a GPA of 3.33 or higher, can take the Comprehensive Examination. During the examination, students have to present their Research Proposal and defend it in front of the Doctoral Program Committee. The committee may allow the resubmission of research proposals that fail at the exam, in which case they must be defended again at a retaken examination within 4 months of the first exam. The Comprehensive Examination can be retaken only once.

Candidacy Period

After students pass the Comprehensive Examination, they have the status of Doctoral Candidates. While receiving the stipend, doctoral candidates shall reside in Vienna and attend the University on a regular basis. Doctoral candidates shall participate in the academic life of the department and attend seminars, programs and lectures. With the prior permission of the Doctoral Program Committee, a doctoral candidate may spend specified periods during the doctoral candidacy period out of residence in Vienna. The permission can be given for maximum of one year at a time. It is the responsibility of the Candidate to make sure that s/he provides adequate contact information during her/his absence.

Supervisors

The supervisor supervises the work of the candidate according to the directions specified in the university doctoral regulations, and prepares a report about the candidate's progress at the end of each academic year. Supervisors are expected to have regular meetings with, and to provide regular feedback to, their students. If either the supervisor or the student feels that their collaboration does not reach the expected standard, they should turn to the Program Director for guidance.

Candidates may request in writing a change of their supervisor or associate supervisor (substantiating such a request). The Doctoral Program Committee is required to address the request within 15 days, and forward its decision on any change in the supervisor's status to the University Doctoral Program Committee for approval. Under special circumstances, the Doctoral Program Committee can also propose a change in supervisor to the University Doctoral Program Committee.

In addition to their supervisor, PhD candidates can benefit from supervision from an associate supervisor and an advisor, who are appointed by the Doctoral Program Committee.

The Doctoral Program Committee appoints an associate supervisor for each candidate, typically from the faculty members of the Department. The associate supervisor may also be an external expert of the field of research of the student, and may come from other departments of CEU or another university. The associate supervisor can be occasionally consulted on specific questions related to the candidate's work, but cannot be expected to offer full guidance in the way the supervisor is.

Upon request, an advisor can be appointed by the Doctoral Program Committee for a candidate. The advisor can be anyone who is competent in the research topic of the candidate and who shall take an important role in the supervision of the candidate.

With respect to the Doctoral Program Committee, the responsibility for the appropriate supervision of doctoral candidates is the responsibility of the main supervisor.

Expected work during the candidacy period

Starting from the second year, students are required to submit a chapter of their forthcoming dissertation and a progress report about their research by May 31 each year, until their dissertation is completed. Normally, the dissertation chapter (5,000 to 10,000 words) includes the report of the studies completed within the year. If there are no sufficient findings to include, this chapter can present a set of null results, a theoretical advance, a literature review, etc., which could all be part of the dissertation. Instead of a chapter, a paper submitted, or accepted, for publication is also acceptable. There is no obligation to include this chapter/paper in the eventual dissertation. The progress report should be brief but informative and specific (no more than two pages in length). It should provide an assessment of the progress according to the working plan specified in the research proposal, and adjustments made to the original plan, if any. It could be supplemented by additional materials documenting the progress. The report should also contain the student's own assessment of what has been achieved, what kind of scientific problems were encountered during the reporting period and what measures have been taken to surmount these. The report and the dissertation chapter are evaluated by the supervisor(s) and a second reader selected from the Faculty and has to be accepted by the Doctoral Program Committee. Supervisors give written feedback both about the submitted chapter and about the progress of the student by the end of the academic year (July 31). Readers provide written feedback about the submitted material if it is not an already published paper.

Attendance at the Departmental Colloquia and Journal/Research Clubs is required throughout all three terms of the academic year. In the second and third year, two ECTS credits per term are awarded for attendance of each of these. The candidates are also requested to participate to the yearly departmental research progress workshop. During this workshop, they present their latest studies and results to an audience made of all the members of the department. They earn four ECTS for each of their participation. The candidates are expected to participate to at least two international scientific conferences during these year and earn 4 ECTS for each. Last, the candidates are required to act as Teaching Assistant for at least one course. They earn 8 ECTS for their TA-ship.

If the required amount of credits is not earned during the 2nd, 3rd and 4th year, they should be acquired during subsequent years before the dissertation is submitted.

Summary of credits to be earned in the second, third and fourth year

Year 2 Requirements 60 ECTS			
Term	Module	Requirement	ECTS
Fall Term 8 ECTS	Academic activities - 4 ECTS Students must complete both activities, earning 2 ECTS for each.	CDC Seminar/Department Colloquium	2
		Journal Club/Research Club	2
Winter Term 8 ECTS	Academic activities - 4 ECTS Students must complete both activities, earning 2 ECTS for each.	CDC Seminar/Department Colloquium	2
		Journal Club/Research Club	2
Spring Term 48 ECTS	Academic activity - 8 ECTS Students must complete all three mandatory academic activities, earning 8 ECTS.	CDC Seminar/Department Colloquium	2
		Journal Club/Research Club	2
		Conference presentation	4
		Presentation to the research progress workshop	4
	Milestones - 36 ECTS Note that although the credits are awarded in the Spring Term once the PhD Progress Report and Chapter have been submitted, the workload is distributed along the entire academic year.	PhD Progress Report and Chapter	36

Year 3 Requirements 60 ECTS			
Term	Module	Requirements	ECTS
Fall Term 8 ECTS	Academic activities - 4 ECTS Students must complete both activities, earning 2 ECTS for each.	CDC Seminar/Department Colloquium	2
		Journal Club/Research Club	2
Winter Term 8 ECTS	Academic activities - 4 ECTS Students must complete both activities, earning 2 ECTS for each.	CDC Seminar/Department Colloquium	2
		Journal Club/Research Club	2
Spring Term 48 ECTS	Academic activity - 8 ECTS Students must complete all three mandatory academic activities, earning 8 ECTS.	CDC Seminar/Department Colloquium	2
		Journal Club/Research Club	2
		Conference presentation	4
		Presentation to the research progress workshop	4
	Milestones - 36 ECTS Note that although the credits are awarded in the Spring Term once the PhD Progress Report and Chapter have been submitted, the workload is distributed along the entire academic year.	PhD Progress Report and Chapter	36

Year 4 Requirements 60 ECTS			
Term	Module	Requirement	ECTS
Fall, Winter and Spring	Academic activities 28 ECTS	Conference presentation	4
	Students must complete a mandatory conference presentation for 4 ECTS, and earn an additional 16 ECTS credits from academic activities.	TA-ship	8
		Advanced Academic Activities The candidate selects together with her supervisor one academic activity, which can include: <ul style="list-style-type: none"> - Visiting studentship outside of CEU PU for more than 3 months on the basis of a research project (report required) - Teaching courses worth of 4 ECTS, or being teaching assistant for courses worth 8 ECTS - Other academic activities approved by the Department's board of faculty, including internship in private companies, publications of papers that are not part of the dissertation (for which the candidate may not be first author), etc. 	16
	Milestone 40 ECTS	Dissertation A completed doctoral thesis that is evaluated by the primary supervisor as worth submitting is granted 40 credits.	40

Duration

Students are required to submit their dissertation within six years from the date of the original enrollment. Any re-submission, if needed, must be done within two years of the original submission.

Withdrawal & re-enrollment

A candidate may request permission from the Doctoral Program Committee to withdraw from the Doctoral Program for a period of up to 2 years. A candidate granted leave may seek re-enrollment within the 2 years period from the Doctoral Program Committee. The time spent prior to withdrawal is counted towards the 6-year period within which a dissertation may be submitted.

Extension

Extensions can be granted by the Rector, upon the recommendation of the University Doctoral Program Committee, before the termination of the enrollment. If a candidate would like to have an extension, they need to submit a request to the University Doctoral Program Committee; they can also ask the supervisor and the departmental Doctoral Program Committee to support the request.

Exemptions, appeals

Doctoral students, who seek an exemption from a requirement, can turn with their request to the Doctoral Program Committee. This can include exemption from the residency requirement; exemption from the monthly contact with the supervisor; a request for extending a deadline for the coursework, and so on. The requests should be made in writing and sent to the head of the Doctoral Program Committee. The reason for exemption should be indicated in the request, be it medical, personal or other reason.

Appeal against the decisions of the Doctoral Program Committee can be lodged with the University Doctoral Committee.

Dissertation

The PhD dissertation is an academic work that provides original contribution to the knowledge in areas of Cognitive Science, and is publishable quality by international standards. The dissertation can be an assembly of published papers of related research material.

Length and format

The dissertation is normally 30,000 to 50,000 words long, but shall not exceed 80,000 words (including tables, graphs and footnotes; excluding bibliography) without prior permission of the Doctoral Program Committee. The submitted dissertation shall include:

- a title page including the authors name, date of submission, supervisor's name;
- a table of contents;
- an abstract of maximum 500 words;
- a signed statement that the dissertation contains no materials accepted for any other degrees in any other institutions;
- a signed statement that the dissertation contains no materials previously written and/or published by another person, except where appropriate acknowledgment is made in the form of bibliographical reference, etc.;
- where the work is based on joint research, disclosure of the respective contribution of the authors.

Two hard copies of the dissertation shall be submitted to the departmental coordinator, who forwards these to the Doctoral Program Committee. After the dissertation has been approved by the Dissertation Program Committee and the required modifications, if any, have been implemented, an additional hard copy shall be submitted to the CEU library, and an electronic version of the dissertation shall be uploaded to the CEU electronic dissertation database. If the Doctoral Student plans to publish the

doctoral dissertation, he/she may request an exemption from the requirement of uploading the doctoral dissertation to the CEU database. The request shall be submitted to the Doctoral Program Committee.

Dissertation Committee

Upon the submission of a dissertation, the Doctoral Program Committee initiates the dissertation procedure within 2 months. The Doctoral Program Committee selects two examiners for the dissertation who are external to CEU. The Doctoral Candidate whose dissertation is examined shall be invited to name individuals whom he/she does not wish appointed as examiners and shall give precise reasons for such exclusions. If the Doctoral Program Committee does not take these suggestions into account, the candidate may appeal against the decision to the University Doctoral Committee.

The examiners provide a written report of the dissertation within two months of their appointment. Each examiner is asked to indicate in writing whether the dissertation can be submitted for defense. When writing their report, the examiners are asked to consider whether:

- a) the dissertation makes a significant contribution to the knowledge and to the understanding of the subject with which it deals;
- b) the dissertation demonstrates the candidates' capacity to carry out high-quality independent research;
- c) the dissertation contains material worthy of publication;
- d) knowledge of the state of the art in the specific subject is demonstrated;
- e) the format and quality of the writing is satisfactory.

If both reports are negative (defense of the dissertation is not recommended), the dissertation is regarded as effectively failed. In this case, the Doctoral Program Committee decides whether the Candidate is permitted to submit a new dissertation within a specified time. At the second failure, the student status of the Candidate is terminated without the possibility of resubmission. If one of the reports is negative, the Doctoral Program Committee decides whether (1) to allow the student to attempt the defense of the dissertation, (2) to ask the student to re-write and resubmit the dissertation, or (3) to appoint a further external examiner.

The Dissertation Committee includes the two examiners and a faculty member of CEU who chairs the committee. The members of the Dissertation Committee are appointed by the University Doctoral Committee on the basis of the recommendation of the departmental Doctoral Program Committee. The supervisors of the candidate cannot be members of the Dissertation Committee.

Defense

The defense should take place within three months of the receipt of a sufficient number of positive examiner's reports. The defense is open to the public and is advertised at least a month before it takes

place. The Candidate receives the reports of the external examiners in advance. The usual procedure of the defense is as follows:

- The Chair introduces the members of the Dissertation Committee (DC).
- The Candidate presents a summary of the dissertation in a talk of no longer than 45 minutes.
- The Chair of the DC opens the examination by asking members of the DC to raise questions or comments about the dissertation. The examination is not limited in scope: examiners can raise any question, including issues that have not been included in their report. The examination is not limited in time either: members of the DC can ask all questions they deem necessary to come to an informed decision about the quality of the Candidate's work.
- After the examination, members of the audience can ask further questions at the discretion of the Chair.
- The Chair announces that the DC is going to retire for adjudication.
- The Chair of the DC announces the decision of the DC.

The DC has to decide by simple majority vote from the following options:

- a) Candidate be awarded the degree without further modification in the dissertation
- b) Candidate be awarded the degree subject to minor modifications in the dissertation
- c) Candidate not yet be awarded the degree but permitted to re-submit the dissertation in a revised form
- d) Candidate not be awarded the degree.

In case B) is chosen, the Candidate should be provided with a list of required corrections as soon as possible, and the DC decides which member(s) of the DC will check whether the appropriate modifications have been carried out. In this case, no further examination is needed. The deadline for submitting the modified dissertation has to be specified by the DC.

In case C) (possibility to resubmit) is chosen, it is at the discretion of the DC to give further guidance (i.e., other than provided in the examiners' report and during the oral defense) for improvement of the dissertation. If c) is chosen, another examination is organized upon re-submission. Resubmission of the dissertation should take place within 2 years of the first defense.