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Agentur für
Qualitätssicherung
und Akkreditierung
Austria

Expert report on the accreditation procedure for the doctoral programme in 'Cognitive Science' conducted in Vienna by the Central European University Private University

pursuant to § 7 of the Accreditation Regulation for Private Universities 2019 (PU-AkkVO)

Vienna, 10 July 2020

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1 Basic principles for the procedure

The Austrian higher education system

To date, the Austrian higher education system comprises:

- 22 public universities, including the Danube University Krems, a public university for post-graduate continuing education;
- 16 private universities, run by nationally accredited private entities;
- 21 universities of applied sciences, run by state-subsidised entities organised under private law or by nationally accredited public entities;
- the university colleges of teacher education, run by nationally accredited public or private entities;
- the philosophical-theological higher education institutions, run by the Catholic Church;
- the Institute of Science and Technology – Austria, which focusses its tasks on the advancement and appreciation of new fields of research and a post-graduate training in the form of PhD and postdoc programmes.

In the winter semester of 2018/2019, 293,644 students were enrolled at public universities (incl. the Danube University Krems). Furthermore, 53,401 students were enrolled at universities of applied sciences and 14,446 students at private universities.¹

External quality assurance

Pursuant to the Act on Quality Assurance in Higher Education (HS-QSG), public universities shall perform an audit procedure for the certification of their internal quality management system every seven years. There are no legal or financial consequences linked to the decision on certification.

Private universities require institutional accreditation conducted by AQ Austria every six years. After twelve years of uninterrupted accreditation, the accreditation may also be awarded for twelve years. Interim degree programmes and certificate university programmes for further education leading to a degree programme also require accreditation.

Following the six-year period of institutional initial accreditation, universities of applied sciences must be re-accredited. After that, they pass on to the audit system. However, the accreditation is linked to a positive decision on certification in the audit procedure. Before degree programmes may be offered, they must be accredited once.

Accreditation of private universities and their degree programmes

In order to be active as a higher education institution in Austria, private universities require institutional accreditation which must be renewed on a regular basis. In addition to institutional accreditation, newly established degree programmes must be accredited once before they may be offered by the private university. The Agency of Quality Assurance and Accreditation Austria (AQ Austria) is responsible for carrying out accreditation procedures.

¹As at May 2019, data source: Statistics Austria/unidata. Contrary to the data of the public universities, the student numbers of the universities of applied sciences do not include non-degree seeking students. 278,039 degree students were enrolled at the public universities in the winter semester 2018/19.

The accreditation procedures are carried out in accordance with AQ Austria's Accreditation Regulation for Private Universities 2019 (PU-AkkVO). Furthermore, the agency has based its procedures on the Standards and Guidelines for Quality Assurance in the European Higher Education Area.²

The AQ Austria appoints experts for reviewing accreditation applications. On the basis of the application documents and a site visit at the applicant institution, the experts draw up a joint written expert report. The Board of the AQ Austria then makes a decision on accreditation which is based on the expert report and takes into consideration the higher education institution's comment on the expert report. If the statutory prerequisites for accreditation are met and the required qualitative requirements are fulfilled, the degree programmes shall be accredited by official notification.

Before its entry into force, the official notification of the Board shall be subject to approval by the competent Federal Minister. After the procedure has been completed, a report on the outcome of the accreditation procedure as well as the expert report shall be published on the websites of AQ Austria and the applicant institution. Personal data and those parts of the report that disclose funding sources as well as business and operational secrets shall be exempt from publication.

The Act on Quality Assurance in Higher Education (HS-QSG) and the Private Universities Act (PUG) form the legal basis for the accreditation of degree programmes at private universities.

2 Short information on the accreditation procedure

Information on the applicant institution	
Applicant institution	Central European University Private University (CEU PU)
Legal nature	GmbH
Initial accreditation	16.07.2019
Last extension of accreditation	-
Site	Vienna
Number of students	ca. 1800 planned
Information on the accreditation application – PhD in Cognitive Science	
Name of the degree programme	Cognitive Science
Type of the degree programme	Doctoral programme
ECTS credits	240
Normal period of studies	4 academic years (12 terms)
Number of study places	6
Academic degree	Doctor of Philosophy (PhD)
Organisational form	Full-time

² Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)

Language used	English
Site at which the degree programme is offered	Vienna
Tuition fees	Fully funded with scholarship

The Central European University Private University submitted the applications for accreditation on 17.03.2020. In its decision on 08.06.2020, the Board of AQ Austria appointed the following experts for the review of the accreditation applications:

Name	Institution	Role of the expert
Prof. Mark Bishop	Professor of Cognitive Computing Goldsmiths, University of London	Expert from academia
Prof. Martin Fischer, Ph.D.	Universität Potsdam Chair of the Cognitive Sciences	Expert from academia Chair
Prof. H.A. Asli Özyürek	Radboud University Donders Institute Nijmegen /Max-Planck Institut	Expert from academia
Dr. Elie El Rassi, MSc	Universität Salzburg Center for Cognitive Neuroscience	Student

Due to the Covid-19-related measurements taken by the Austrian government and, in consequence, by AQ Austria, the site visit already planned had to be cancelled. As an alternative, virtual conferences were held giving the experts the opportunity to talk to CEU PU faculty and students. In addition, preparatory virtual meetings were held for the experts to consult about their findings and draft their joint report.

On 1 July 2020 the expert panel and representatives of the AQ Austria conducted online-discussions with the representatives and students of the Central European University Private University. In addition, some general questions were address by CEU PU via video-interviews conducted by the CEU PU accreditation officer with the President of CEU PU, Mr. Michael Ignatieff, and the CEU PU Provost, Mr. Liviu Matei.

'Cognitive Science' doctoral programme

3 Review and assessment based on the assessment criteria stipulated in the PU-AkkVO – 'Cognitive Science' doctoral programme

3.1 Assessment criterion § 18 (1) 1 to 2: Development and quality assurance of the doctoral programme

Development and quality assurance of the degree programme

1. The degree programme was developed using a predefined procedure for the development and establishment of degree programmes and involving the relevant stakeholder groups.

The panel of experts found that the CEU PU has clear predefined procedures for the development and establishment of a PhD programme in Cognitive Science. The relevant procedures are detailed in the supplied document "Policy on establishing, operating and modifying degree programs at CEU PU", in particular Annex 1: "Information to be included in a proposal for establishing a new degree programme at CEU PU". The policies outlined herein - e.g. justification for programme and relation to strategic goals of CEU PU; aims and outcomes; structure; targets; content (Annex 2) etc. - are in line with similar programmes at comparable higher education institutions (eg. UCD; Goldsmiths; Kent). Furthermore, as the programme has been accredited and successfully operating in Budapest for some time the situation differs from the accreditation of a new programme. "At the end of the 2015/16 academic year, when the PhD Program in Cognitive Science at CEU turned 5 years old, the Doctoral Program Committee (DPC) decided to conduct a review of the programme in order to assess whether any change was required in the curriculum or in the programme regulations. The review was performed in the Fall term of the 2016/17 academic year." This shows that the programme is incorporated in the quality management system of the private university (see also below).

The panel of experts considers the criterion to **be fulfilled**.

Development and quality assurance of the degree programme

2. Following its accreditation, the degree programme is incorporated into the private university's quality management system. The quality assurance measures also comprise adequate structures and procedures to ensure that the rules of good scientific practice are adhered to.

The panel of experts found that Annex 2 of CEU PU Institutional Assessment and Quality Assurance (IAQA) document details appropriate policy to ensure that the rules of good scientific practice are adhered to, assessing criteria including: the performance of the unit; development since last review; the unit's research output; curriculum developments; collaboration and new directions. These criteria are assessed by an ad hoc 'strategic review committee' comprising relevant stakeholders including unit head; head of programme; curriculum committee; junior faculty; other staff (including professional services) and students etc., as defined by the scheduled review calendar. The committee is responsible for producing a clearly defined report, based on the above, detailing teaching & learning; applicants; research; collaboration and admin. The report is subsequently made available to relevant stakeholders. In addition, there are strategic reviews with the involvement of external experts every five years. Finally, other

measures include self-assessment on the programme's performance, individual faculty members' academic activity reports, and anonymous student evaluations on courses and doctoral dissertation supervision.

In alignment with standard procedures, doctoral students are provided a network of support with one primary supervisor, a secondary supervisor, and a mentor. Students additionally may benefit from further consultation with internal or external advisors. In summary, these processes are in line with best practice from other international higher education institutions (HEI) and this offers appropriate evidence that the criterion **is fulfilled**.

3.2 Assessment criterion § 18 (2) 1 to 6: Research environment

Research environment

1. The private university has developed a research concept which incorporates the doctoral degree programme and a development plan which comprises enhancement measures for the degree programme.

The expert panel found that, in section 11 of their "Proposal for a doctoral program accreditation in Austria", the applicants describe a research concept that is focused on the topics of social cognition and learning, with the doctoral degree training predominantly taking place in one of three thematically associated substructures of the department. These structures are the Cognitive Development, the Social Mind, and the Cognitive Computation Centers. Each PhD student makes a selection from these three options after having been in the Cognitive Science Programme for year 1, based on a proposal for research that was developed during this time.

Moreover, the expert panel found that the research concept of the Cognitive Science PhD programme at CEU PU is characterized by interdisciplinary training. The interdisciplinary nature of the PhD training, which is commensurate with the field itself, is reflected in the competence profiles of the department's faculty. The faculty brings together world-leading experts and junior scientists with excellent track records from several disciplines related to the three structures of the department. Moreover, students are allowed to choose their second supervisor from other departments, as described in section 13. It is also apparent that students can take a wide range of courses relevant for the interdisciplinary aim of the programme within the Cognitive Science programme as well as outside.

Several enhancement measures are in place that satisfy the expert panel. One of the enhancement measures for the degree programme that is already implemented is to include the participation of PhD students in ongoing research, first by selecting and discussing current topics, then by making proposals for their own research, and finally by presenting their own results at conferences.

A second enhancement measure is to regularly review the quality of the degree programme by obtaining comments from both students and staff. As described in Annex 2.2., this was done in 2016/17 where a few shortcomings were identified, such as the overly ambitious completion goal of 3 years and the redundancy of a previously offered "social cognition" course. These problems were identified (e.g. grade inflation, complaints about the journal club) and in many cases remedied by, for example, extending funding periods to 4 years and replacing the redundant course with methodological training.

Another enhancement measure is that the applicants now consider participation of students in teaching (section 13 of the proposal). While the acquisition of teaching experience is a valuable skill enhancement for future academics, the students' workload needs to be assessed and balanced. For example, as an enhancement measure the experts can foresee that taking many

courses as well as the comprehensive exam is too demanding for students before they launch their own research. The experts do understand this format is adopted from the training system in the United States. However, there students have more time. It might be useful to restrict courses only to those relevant to the PhD project and reconsider the extent of the comprehensive exam. Overall, the experts find that CEU PU has developed a research concept which incorporates the doctoral degree programme and a development plan which comprises enhancement measures for the degree programme.

The experts consider the criterion to **be fulfilled**.

Recommendation: The expert panel recommends monitoring the workload in light of future teaching assignments and comprehensive exam assignments for the students.

Research environment

2. The private university has defined a research focus for the degree programme which covers the broadness of the respective discipline as regards content and methods. The focus of the research performance corresponds to the university's approach as well as to the respective subject culture and guarantees international visibility.

In their "Proposal for a doctoral program accreditation in Austria", the applicants describe their research foci as social cognition and learning, with a wide range of related content and methods being made available to PhD students as part of their interdisciplinary training. The expert panel was able to derive from Table 1: Module Completion Requirements and Course Offering and Table 2: Program Sample Schedule for doctoral programs that the students have choices ranging from behavioural and developmental to neuroscientific (EEG) and statistical/computational methods, including knowledge dissemination through both lectures/seminars and hands-on trainings. The latter is related to specific methods and to transferrable skill such as conference presentations and discussions of the state of the art of literature from their field of specialization. As a result of this close match between faculty expertise and mix of theoretical and practical training, the students can contribute to the forefront of research by participating in conferences and by producing joint publications with their supervisors. These activities ensure that the research initiated in the cognitive science degree programme regularly contributes to international visibility of the programme in high-quality peer-reviewed journals, as listed in Appendix 2 to Annex 2.2 (Review of the Doctoral Program).

Although it has been argued that the term 'cognitive computing' had no generally agreed definition in either academic or industry, the cognitive computing core of the PhD programme appears somewhat narrowly focused on exploring how "*methods, concepts, and frameworks that utilise the apparatus of mathematics, statistics, theoretical computer science, and decision theory in order to understand and build models of higher cognitive functions of the brain*" ('Program Proposal' document, page 13). This focus ignores reciprocal areas of the subject that find application in industry - exploring computational systems that mimic some functioning of the human brain and help to improve decision-making; as the journal Cognitive Computing describes, "*basic and applied work involving biologically-inspired computational accounts of all aspects of natural and artificial cognitive systems*". This appears to be a telling oversight, given the huge demand for graduates with these skills from industry and the expert panel suggests that the programme would be significantly strengthened by the inclusion of materials in this area. This aspect could also be included in future teaching. Overall, the experts find that CEU PU has defined a research focus for the degree programme which covers the broadness of the respective discipline as regards content and methods. The focus of the research performance corresponds to the university's approach as well as to the respective subject culture and guarantees international visibility.

The experts consider the criterion to **be fulfilled**.

Recommendations:

The expert panel recommends to expand the scope of research and teaching for cognitive computing to include reciprocal areas of study (how models of the brain and natural systems inform computational methods [eg. Artificial Neural Networks; Swarm Intelligence; Membrane Computing; Evolutionary algorithms etc.]) that find application in industry.

As a further enhancement idea, the experts find the research focus of faculty members a bit too close to each other that make it a bit constrained. Also, given the emphasis on social cognition, an additional expert in the language domain would be an asset (this recommendation can be considered for the two positions open). Adding an expert in cognitive neuroscience who can teach broader techniques might also strengthen and broaden the scope of the program.

Research environment

3. The private university has employed professors qualified in primary occupation in the discipline relevant for the degree programme who cover the broad range of the discipline's content and methods. Primary occupation here means working at least 50% of one's total working hours in salaried employment at the private university.

The application documents for accreditation of the PhD programme in Cognitive Science were carefully studied by the expert panel. They include a list of 10 Faculty CVs. The professors employed by CEU PU have expertise in a broad range of disciplines (as described in Table 3 accompanying the proposal), including developmental (Csibra, Gergely), neuroscientific (Kovacs, Teglas), visual (Knoblich, Perner), social (Sebanz, Knoblich), and cross-cultural (Heintz) cognition. The listing of research awards in section 13 of the proposal illustrates that most faculty members are internationally recognized leaders and qualified to teach the content of cognitive sciences with a focus on social cognition at the level of PhD training. Table 4 states that this impressive range of internationally recognized academic leadership is complemented by computational (Lengyel) and anthropological (Sperber) expertise, although the former is a teaching fellow and the latter not offering his own course. To summarize, with the exception of the experts' remark on narrowness of cognitive computing in section (2) above, there is good evidence for a broad range of academic excellence in cognitive sciences that supports the delivery of the intended content of this PhD program. Based on information provided by Prof Fiser during the interview stage, the expert panel rests assured that all faculty are appointed for at least 50% of their total working hours in salaried employment at the private university.

The experts consider the criterion to **be fulfilled**.

Research environment

4. The private university maintains institutionally anchored co-operation projects in research and development or the development and appreciation of the arts which are relevant for the degree programme and adequate for the respective subject culture.

The doctoral programme proposal Section 11) states that the PhD programme plans to develop cooperations with Viennese institutions, and that initial contacts to the University of Vienna have already been established, involving Professor Goebel and Professor Lamm (same document, page 3). Moreover, the expert panel found that co-operation projects are also anchored in the study regulations, which permit PhD students to select a second supervisor from another department (page 5 of the same document). Further evidence for co-operation activities includes regular appointments of external researchers for teaching purposes and links to

alumni, many of whom have found employment internationally (proposal document section 9, page 1). The cognitive science programme has had several recent international collaborations, as listed on page 13 of the proposal and has organized international workshops where students can participate.

The experts consider the criterion to **be fulfilled**.

Recommendation: As another potential collaboration partner, the expert panel recommends that the Cognitive Science PhD programme at CEU PU, once settled in Vienna, considers institutionalizing also a collaboration with Uni Salzburg.

Research environment

5. The private university promotes research and development activities by providing for appropriate organisational or structural framework conditions.

Good structural support for research comes from the excellent lab facilities that were present at Budapest and are (or will be) recreated in Vienna. These include several hundred square meters of lab space dedicated to the three research priorities of the Cognitive Science programme and equipped with state of the art research apparatus, although the neuroscience facilities might need to be expanded. Funding for this currently comes from the generous endowment that is allocated to the research activities at CEU PU. In addition to endowment-based support for research, it is clear to the expert panel that the members of the cognitive science programme at CEU PU have secured impressive levels of research funding (proposal document) which is dedicated to the infrastructure. The expert panel found that there is sufficient personnel to implement all research and development activities.

Another organizational and structural framework for the promotion of research and development activities is the training programme for PhD students, which includes an early opportunity to contribute to ongoing research projects.

The experts consider the criterion to **be fulfilled**.

Recommendation: The expert panel believes that the neuroscience facilities might need to be expanded beyond electro-encephalography (EEG) and near-infrared spectroscopy (NIRS). Perhaps collaborations for functional magnetic resonance imaging (fMRI) with other universities can be initiated.

Research environment

6. The private university's research infrastructure as well as its facilities and equipment are adequate on a quantitative and a qualitative basis for operating the degree programme. In the case that the private university draws on external resources, their authorisation to use them has been contractually secured.

One reason for the current international visibility of research conducted at CEU PU is their impressive research infrastructure in Budapest, amounting to lab space of over 500 m² that was allocated to extensive baby, social, vision, and music labs. This quantitative basis for operating their degree programme will be available in Vienna. In their transition plan (Annex 2.4) as well as in their proposal document, the applicants describe their intention to re-create lab facilities that are "equal or better". The current situation at Quellenstraße amounts to only 210 m². This appears commensurate with the only partial transition to Vienna that is scheduled to take place over the summer 2020, with the Social Mind Center being the first of three units to complete the move. The remaining two units (Cognitive Development Center and Cognitive Computing Center) are scheduled to transition in the summer 2021 and there is evidence of a

large-scale rental agreement (Annex 1.3.2). Moreover, the expert panel is satisfied to see that there is a letter of commitment provided by the Rector Dr Ignatieff (see Appendix 2.4), which assures a financial support for the infrastructure development that is needed to return to or exceed the former infrastructure capacity.

As can be inferred from the Budget plans (Annex 2.4.), there is a fit-out budget of 1.2 Million Euros allocated to the academic year 2020/21. The high quality of the Vienna research infrastructure will be ensured by purchasing state of the art equipment that matches or exceeds the standards of the former lab equipment. In the proposal itself examples of such equipment are given (high-density electro-encephalography (EEG), functional near-infrared spectroscopy (NIRS), multiple eye trackers).

The experts consider the criterion to **be fulfilled**.

3.3 Assessment criterion § 18 (3) 1 to 3: Supervision and counselling services

Supervision and counselling services

1. *The private university shall conclude agreements with the doctoral students which govern the respective rights and duties of the private university, the doctoral students and their supervisors.*

The expert panel has determined that the duties and rights of doctoral students are clearly defined in the "CEU PU Doctoral Regulations". Section 5.1 (ibid) states that doctoral students must sign a Doctoral Supervision Agreement between the supervisor(s) and themselves that includes the basic details of the proposed dissertation, the name of the supervisor(s), the deadlines and the responsibilities of the doctoral student and the supervisor(s). The duties and rights of doctoral students are similarly defined in section 3.4 (ibid) and, for example, ensure that student's "*original data and any other original research results are stored properly and made available if necessary*"; initiate "*discussions with their supervisors on the type of guidance and comments considered helpful, and agreeing to a schedule of meetings which will ensure regular contact*"; provide "*a written report to the Doctoral Program Committee at least once a year, documenting the progress of the work/research as agreed with the principal supervisor*" etc.

Moreover, the expert panel found that the duties of supervisors are outlined in section 5 (ibid) and for example ensure that "*the Doctoral Program Committee shall appoint a principal supervisor to a Doctoral Student and forwards the name to the University Doctoral Committee for approval*"; "*the Doctoral Program Committee may appoint an associate supervisor in cases in which the complexity of the studied field requires so, or if the principal supervisor is absent for a substantial time*"; "*giving guidance about the nature of research and standards expected, about the choice of research topic, about the planning of the research program and about relevant literature and resources*"; "*giving detailed advice in order to ensure that the whole research project and dissertation writing is completed within the scheduled time*" etc.

Finally, the expert panel is satisfied that the duties of the university are also clearly outlined (ibid) and, for example, ensure that a suitable "'Doctoral Program Committee' oversees the operation of the doctoral program".

Given the above evidence, it is clear that the criterion **is fulfilled**.

Supervision and counselling services

2. *The private university shall enable the doctoral students to engage in an intensive dialogue with scientists or artists, respectively, by collaborating with higher education institutions and, if applicable, partners outside the higher education area in Austria and abroad and promote the participation of doctoral students in national and international symposia.*

The expert panel found several indications that this criterion is fulfilled, including:

- “In line with the University’s commitment to interdisciplinary, PhD Students undertake interdisciplinary research drawing on psychology, neuroscience, philosophy, mathematical modeling, linguistics, and the social sciences. PhD students are given opportunities to do cross-departmental work: several PhD courses are cross-listed from other CEU PU departments. Students can choose to their second supervisor from another department (for instance, this year one of the 6 first-year PhD students co-supervised by a faculty member from the Department of Sociology and Social Anthropology)”, (Proposal for doctoral program accreditation in Austria).
- “The transfer to Vienna also brings new opportunities for the department for research and teaching collaboration. In particular, Vienna hosts a ‘Cognitive Science Hub’, which we are eager to join. The department has already had a long-term collaboration with the MeiCogSci (Middle European Interdisciplinary master’s program in Cognitive Science), and we intend to strengthen our collaboration with the other research and teaching institutions of Vienna”, (ibid).
- “The department has already had a long-term collaboration with the MeiCogSci (Middle European Interdisciplinary master’s program in Cognitive Science), and we intend to strengthen our collaboration with the other research and teaching institutions of Vienna. For instance, members of our department have already explored collaboration with Werner Goebel, University of Music and Performing Arts and Claus Lamm, University of Vienna, Department of Psychology”, (ibid).

Given the above evidence, it is clear that the criterion is **fulfilled**.

Supervision and counselling services

3. *The private university shall provide the doctoral students with adequate counselling services which are tailored to the specific degree programme.*

Evidence that this criterion is fulfilled relates to the applicants’ descriptions of their counselling services and mentoring. Specifically, the expert panel found that:

- Counseling services: CEU PU offers confidential student psychological counseling services, providing professional help and support for students’ personal concerns. Professional counselors provide individual counseling. Issues students typically turn to the counseling service with include are (but are not limited to): lack of motivation or direction, concentration difficulties, low confidence or self-esteem, homesickness or loneliness, eating or body image issues, grief or bereavement, bullying, anxiety, stress, panic attacks, perfectionism, obsessions/compulsions, depression or mood difficulties, self-harm, addiction or substance use, relationship issues, traumatic experiences, concerns that may result from racial, cultural, personal, sexual or gender identity issues.
- In addition, PhD candidates are asked to choose a mentor among the faculty members and postdoctoral researchers of the department. Mentors are meant to help if needed with career advice and difficulties at work for which the candidate prefers not to involve the program director.

The experts consider the criterion to **be fulfilled**.

Recommendation: CEU PU may wish to consider the implementation of processes to deal with potential institutional bias, racism, harassment, etc. Specific examples include: Mechanisms for safe/anonymous reporting of allegations of harassment and bias; staff training, and, wherever possible, recruitment panels to be appropriately ethnically and gender-balanced.

3.4 Assessment criterion § 18 (4) 1 to 8: Degree programme and degree programme management

Taking into account a heterogeneous student body, the following criteria shall apply. In the case of doctoral programmes with special profile elements, the descriptions shall furthermore address the characteristics defining the profile. Special profile elements in doctoral programmes may include, for example, distance-learning degree programmes or joint degree programmes.

Degree programme and degree programme management

1. The profile and the intended learning outcomes of the degree programme have been clearly defined. They include scientific as well as artistic competences, personal skills, and social competences and are in accordance with level 8 of the National Qualification Framework.

Based on the program proposal, the expert panel finds that the profile of the degree programme is clearly defined with a particular emphasis on social aspects of cognition (see proposal document section 11). The learning outcomes are clearly defined as well, in terms of both scientific competences (such as theoretical and methodological skills) and soft skills (such as writing, presenting), as stated in Annex 2.1 PhD in Cognitive Science Draft Regulations. Ultimately the goal is to train students that will be competitive on the academic (or non-academic) job market.

The coursework outlined in the Syllabus thoroughly covers the theory and methodology at the state of the art of the topics they cover, and these contents are delivered by experts in the respective fields. Further, some of the coursework includes writing up scientific reports, and students are required to orally and visually present their work during some courses and meetings, as well as at conferences. These factors are intended at developing students' scientific and artistic competences, personal skills, and social competences. They are in accordance with level 8 of the National Qualification Framework and the experts consider the criterion to **be fulfilled**.

Degree programme and degree programme management

2. The name of the degree programme and the academic degree correspond to the degree programme's profile.

The name of the degree programme is 'Cognitive Science'. Cognitive science is the multidisciplinary study of mental processes. The research at the department in which the programme is hosted has expertise in multiple disciplines ranging from neuroscience to cognitive anthropology. As such the name of the programme adequately reflects the programme's profile and the experts consider this criterion **fulfilled**.

Degree programme and degree programme management

3. The minimum duration of studies stipulated in the curriculum is three years. The contents and structure of the curriculum ensure that the intended learning outcomes are achieved, while combining research (research and development and/or advancement and appreciation of the arts) and teaching.

The expert panel found that the learning outcomes (programme proposal) of the training program are:

- 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 expert panel found that the duration of studies stipulated in the curriculum is four years (Program Proposal, Curriculum Structure). During the interviews with representatives it emerged that sometimes that duration is exceeded, e.g., when planned publications cannot progress, due to unexpected null results. The contents and structure of the curriculum includes, among others, courses on statistics, on neuroscientific methodology and on programming. These ensure that the intended learning outcomes are usually achieved within 4 years. Teaching activities are not part of the curriculum, but based on the interview with CEU PU representatives, students who wish to teach may become involved in future. Large parts of the first year of the curriculum is heavily based on coursework, while the rest of the curriculum has less coursework, allowing students to first gain their theoretical footing and develop their research projects, and then perform that research across 3 years. As such the experts consider this criterion to **be fulfilled**.

Recommendations:

The addition of teaching assignments should not come at the expense of increasing the already heavy workload. Rather, we recommend the workload to be reduced, and teaching to replace some coursework.

Students should be better informed from the outset about the average duration for finishing the thesis, as well as about the first year course requirements and about the workload of the obligatory comprehensive exam.

Furthermore in order to avoid PhD trajectories much in excess of 4 years (e.g., due to non-significant results of experiments), the experts recommend to adopt preregistered studies as part of thesis chapters.

Degree programme and degree programme management

4. The workload related to the individual modules ensures that the intended learning outcomes, especially writing the doctoral thesis, can be achieved within the stipulated duration of studies. The ECTS is applied correctly; in any case to the curricular parts (courses) of the degree programme.

The workload related to the individual modules is reasonable albeit somewhat heavy when compared with other doctoral programmes in Europe, in particular due to the many courses on the curriculum. The experts recommend that courses have shorter formats, and that more of

them be made optional rather mandatory. This would allow for training better tailored to students' needs: they would focus on the topics they are more interested in. Presumably students have completed a Master degree or equivalent in a related field, so they are expected to enter the program with knowledge that is sufficient for them to know what they are interested in.

Based on the review of the Doctoral Program in Cognitive Science at CEU conducted in 2016/17, and the interviews with CEU PU representatives and students, the workload has already been significantly reduced compared to previous versions of the doctoral programme, a step in the right direction. The workload can be achieved within the stipulated duration of studies and the ECTS is applied correctly. For ECTS purposes, courses can be replaced with more practical assignments such as teaching, supervising students, organizing workshops and conferences, doing lab work, etc. As such the experts consider this criterion to **be fulfilled**.

Recommendation: Workload can be further reduced: the grade average 3,3 requirements as well as the demands for the comprehensive exam could be made more lenient to free time for other tasks. Alternatively, courses can be tailor-made to relate to the thesis topic.

Degree programme and degree programme management

5. Regulations for doctoral programmes have been established. The examination methods are suitable to assess whether and to what extent the intended learning outcomes have been achieved.

The expert panel has established that the examination methods are clear at all levels of the programme (Annexes 2.1). Exams for the courses are varying from essays, to critical questions, written exams etc. (PhD in Cognitive Science Syllabi Annex). As for the Comprehensive Exam, after completion of course work students present their Research Plan and this is appropriate. The fact that dissertation should be submitted within 6 years is indicated. The length and format criteria of the dissertation as evaluation criteria are appropriate. There are also sufficient criteria for evaluation of the thesis such as to make a significant contribution to knowledge, high quality independent research, worthy of publishing research, demonstration of state of the art knowledge in the area and high level format and quality of writing.

The experts consider the criterion to be **fulfilled**.

Recommendation: The expert panel believes that the criteria for finishing a thesis can be stated more clearly. Having students prepare manuscripts (publishable or preregistered) should be enough criteria and should be discussed with students in advance to avoid excessive delays.

Degree programme and degree programme management

6. A "Diploma Supplement" that complies with the requirements laid down in Annex 1 to § 6 of the University and Higher Education Statistics and Education Documentation Decree (Universitäts- und Hochschulstatistik- und Bildungsdokumentationsverordnung, UHSBV), original version: F. L. G. II no. 216/2019, will be issued.

The Diploma Supplement example (Annex 3) complies with the requirements of the University and Higher Education Statistics and Education Documentation Decree, and will be issued.

The experts consider the criterion to be **fulfilled**.

Degree programme and degree programme management

7. The admission requirements have been clearly defined. In terms of the qualification level, they correspond at least to the provisions provided by the Universities Act (UG).

The admission requirements are defined in the CEU PU Admissions Policy (Annex 1.2.2). This includes a completed Application form, CV, proof of English proficiency, two letters of recommendation, academic records, a research proposal and a small fee. Applicants to the program are expected to hold an internationally recognized master's or comparable degree in the disciplines that constitute cognitive science. A comparable degree in social sciences, humanities, or other disciplines will also be considered in case of an excellent academic record. In exceptional cases, students who only hold a bachelor's degree could also be admitted to the program. Admission to the program is decided on the basis of the academic record of the applicant, a written research proposal, and interviews with at least two faculty members. On the basis of these findings, the expert panel concludes that the admission requirements have been clearly defined.

The experts consider the criterion to be **fulfilled**.

Degree programme and degree programme management

8. The admission procedure has been clearly defined and ensures a fair and transparent selection of the applicants according to the admission requirements and the required competences.

The expert panel saw that this procedure is defined in Annex 1.2.2. Draft Admissions Policy. This is a CEU PU wide document. There the admission procedure is clearly defined under number 4 in three stages of evaluation of documents, testing and interviews, and final selection. As for the Cognitive Science Program, the expert panel gathered the impression that they form a selection committee from their staff to follow this procedure.

The experts consider the criterion to be **fulfilled**.

Degree programme and degree programme management

9. The recognition procedures for higher education competences in terms of crediting towards examinations or parts of a degree programme have been clearly and transparently defined. When recognising or crediting higher education competences, the Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Lisbon Recognition Convention) shall be considered.

The (draft) Admissions Policy and Procedures of Central European University states: "CEU PU participates in the European Credit Transfer Scheme (ECTS). In accordance with the Recommendation on Criteria and Procedures for the Assessment of Foreign Qualifications adopted by the Lisbon Recognition Convention Committee, recognition of foreign qualifications will be granted by CEU NY/CEU PU unless a substantial difference can be demonstrated between the qualification for which recognition is requested and the relevant Austrian qualification. In applying this principle, the University will seek to establish whether the differences in learning outcomes between the foreign qualification and the relevant Austrian qualification are too substantial to allow the recognition of the foreign qualification as requested."

The experts believe that the recognition procedures for higher education competences in terms of crediting towards examinations or parts of a degree programme have been clearly and transparently defined.

The experts consider the criterion to be **fulfilled**.

3.5 Assessment criterion § 18 (5) 1 to 5: Staff

Staff

1. The private university has sufficient scientific and/or artistic staff as well as sufficient non-academic staff for operating the degree programme.

According to Annex 1.2.1 there are several types of academic staff, with faculty having a load of 24 ECTS per year (equaling 2 courses per term on average) and instructors 20 ECTS over two terms. The expert panel noted that the applicant has appointed 10 faculty members (their identities are listed in Table 3 of the document "proposal for a doctoral program accreditation"). These academic staff members were recruited on the basis of their outstanding academic achievements and excellence in research. They all provide complementary multi-disciplinary input into the PhD program with its focus on social cognition. This allows the Cognitive Science program to deliver a high-quality PhD training to its students.

In Annex 1.2.10 the applicant lists all non-academic staff for the entire CEU PU. Of these, at least 3 positions (with Full-Time Equivalent of 2) are specifically allocated to the Cognitive Science Department while others are allocated on a flexible basis when needed (e.g., during lab set-up), as was explained to the expert panel during interviews. In the light of the current transition with an emphasis on dis-assembling, transporting and re-assembling equipment, as well as the need to install new lab equipment and IT infrastructure, the question as to whether additional support is needed to cope with these tasks has therefore been addressed in a satisfactory manner. The Annex 1.2.10 also lists a total of 41 persons (FTE 38.18) working as information technology staff, including IT engineers, system supervisors and IT integration specialist.

In light of this information provided by the applicant, the expert panel is satisfied that the criterion is **fulfilled**.

Staff

2. The scientific staff or the artistic staff, respectively, is qualified according to the requirements of the activities provided for in the degree programme. The scientific and/or artistic staff envisaged for the supervision of thesis projects is authorised to teach (venia docendi) or has an equivalent qualification for the scientific or artistic subject, respectively. It is involved in the research and development or the advancement and appreciation of the arts of the respective subject and performs research and development activities which are in accordance with the university's approach and the respective subject culture. The majority of the scientific and/or artistic staff assigned to the supervision of theses has experience in this field.

The degree programme requires that students receive training in scientific methodology and knowledge about state of the art of the field of social cognition and cognitive science. The *venia docendi* or formal equivalent will have been obtained by most of the professors at other universities prior to their appointment at CEU PU because they achieved a professorial appointment or "habilitation" abroad. The exceptions to this formal qualification are Teglas, Kovacs, and Heintz. These scientists do, however, document with their CVs an age- and position-appropriate status as independent research leaders in their respective fields of expertise. Therefore, the staff qualifications are entirely commensurate with the degree objectives.

The experts consider the criterion to **be fulfilled**.

Staff

3. The benchmark for an adequate tutoring ratio for the supervision of doctoral theses is eight doctoral students per supervisor (full-time equivalent).

The expert panel has learned that the Cognitive Science Program at CEU PU accepts 6 students out of 30-70 applicants per fall term into its cognitive science programme (Sections 21 and 22 of the document "proposal for a doctoral program accreditation"). The programme currently hosts "more than 35" (Page 1 of the document "proposal for a doctoral program accreditation").

The applicant has provided CVs of 10 faculty members (Table 3 of the document "proposal for a doctoral program accreditation"). In section 13 (page 6) of the same document, the applicants state that the current faculty to student ratio is less than 1/4.

In light of this information provided by the applicant, the expert panel is satisfied that the criterion is **fulfilled**.

Staff

4. The prioritisation of the teaching, research, and administrative activities of the scientific and/or artistic staff in primary occupation at the private university ensures that there is sufficient time for research and development or the advancement and appreciation of the arts as well as the supervision of doctoral students.

In order to come to a conclusion on this point, the expert panel examined two documents: According to Annex 1.2.1, the faculty members should allocate 30-50% of their time to teaching, 30-50% of their time to research, and 20-40% of their time to administrative duties. According to the syllabus provided by the applicants, the workload is distributed fairly evenly across these staff members, with a typical workload of 2 courses per term. Apparent exceptions are Prof Sperber, who is part-time and not offering a course, and Prof Heintz who offers 3 courses (Experimental Economics, Cognition and Culture, and Topics in Cognitive Science), as well as heading the department. This latter workload appears relatively high in comparison to other staff members but is also manageable, as was assured to the expert panel during the interviews with CEU PU staff, who pointed out that there is a close link between research and teaching activities.

The experts consider the criterion to **be fulfilled**.

Staff

5. The private university provides for personnel development measures aimed at the supervision of doctoral students

During the interviews with CEU staff, it became clear that there is a "center for learning and teaching" to which both students and staff can turn for precisely such training requests (Prof Heintz) and that other staff training activities (e.g., related to IT skills in times of video-based teaching) are also in place (Prof Sebanz). Moreover, there is (in Annex 1.2.10) the following relevant listing:

Career Services

- Director (of Career Services)
- (Career Services) Manager
- (Career Services) Officer
- (Career Services) Coordinator

Center for Teaching and Learning – Head Count: 4; FTE: 4

- Director
- Postdoctoral Fellow
- Office Manager

Finally, the Academic Staff Handbook (Annex 1.2.1) also refers to staff development with regard to supervision tasks (see also annex 6 to the Handbook)

In light of this information, the experts consider the criterion to **be fulfilled**.

3.6 Assessment criterion § 18 (6): Funding

Funding

The degree programme's funding is secured. Provisions have also been made to fund expiring degree programmes.

At a time of global pandemic, where HE institutions around the globe are likely to be hit very hard financially by a radically-changed student recruitment environment, the submitted CEU PU video evidence "CEU PU video – 4 Finances.mp4" indicates that the CEU PU - even in the light of the increased financial demands placed on the CEU PU by the migration from Budapest to Vienna - has access to generous funds, including very substantial endowments. Thus, the university is not a tuition- but an endowment-dependent university and current endowments financially secure the university and programme over the six years of the accreditation period (e.g. € 220m from open society; € 550m over 12 years from open society for annual operation; plus an endowment circa € 500m plus research grants with 5% income from tuition fees).

The duration of the Cognitive Science degree programme at CEU PU is 4 years (as seen in the syllabus) and the video evidence "CEU PU video – 5 Student body.mp4" states that CEU PU students are, in general, charged "very little" and further that all PhD students will receive a full PhD. student stipend (the amount per student has increased by 80% since the move to Vienna over 4.5 years; plus an additional 6-month stipend for thesis writing, travel, research travel, etc.). NB. It is noted that in future the model for allocating financial aid will migrate from one based on merit to one based on financial need.

The experts consider the criterion to **be fulfilled**.

Recommendation: The expert panel recommends that funding documentation be revised in line with the 4-year degree duration and that the duration of the guaranteed student stipend be clarified.

4 Summary and final evaluation

Development and quality assurance of the doctoral programme:

CEU PU has clear predefined procedures in place for the development and establishment of a PhD programme in Cognitive Science. CEU PU also has an appropriate policy to ensure that the rules of good scientific practice are adhered to and offers a support network to its cognitive science students. Both criteria in this section are fulfilled.

Research environment:

The applicants describe a research concept that is well focused on the topics of social cognition and learning. Several enhancement measures are in place to promote research and ensure international visibility of the work. The research infrastructure appears both quantitatively and qualitatively excellent. There is evidence for a broad range of academic excellence of internationally leading staff, appointed at 50% or more of their total time. The doctoral programme maintains institutionally anchored co-operations that could be extended to Salzburg. The computing focus appears somewhat narrow and broadening strategies are proposed. Overall, the six criteria in this section are fulfilled.

Supervision and counselling services:

The duties and rights of doctoral students, supervisors, and the university are clearly defined. There is extensive evidence of cross-disciplinary dialogue and participation. Counselling services and mentoring appear adequate but the panel recommends implementing mechanisms to prevent biases. All three criteria in this section are fulfilled.

Degree programme and degree programme management:

This is a suitably named PhD training programme with clear definition of learning outcomes and a plan to involve students also in teaching. There is evidence of systematic course management, although the actual degree duration could be communicated more clearly. Workload could be reduced or tailored. Examination methods are clear at all levels of the programme while criteria for finishing the thesis can be specified further. Admission requirements and procedure and recognition regulations are clearly defined. Thus, all 9 criteria in this section are fulfilled.

Staff:

The programme has high quality scientific and sufficient non-academic staff members that are qualified to deliver the program. The distribution of workload permits sufficient time for research/development activities. The five criteria are considered to be fulfilled.

Funding:

The CEU PU has substantial endowment-based financial support and funding success which appears to secure its maintaining of the PhD programme over the accreditation period. The criterion is fulfilled.

The experts **recommend the Board of the AQ Austria to accredit** the doctoral programme "CEU PU Vienna: PhD in Cognitive Science".

5 Documents reviewed

- Application of the Central European Private University (CEU PU) submitted on 17.03.2020 for the accreditation of the PhD programme 'Cognitive Science', to be offered in Vienna.
- Submission of further information from 30.06.2020 prior to the site visit (via e-mail)