

Expert report on the accreditation procedure for the “Business Analytics” and “Finance” master degree programme to be offered in Vienna by the Central European University Private University

According to § 7 of the Accreditation Decree of Private Higher Education 2019 (PrivH-AkkVO 2021)

Vienna, 18.05.2022

Table of contents

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1 Short information on the accreditation procedure..... | 4 |
| 2. Review and assessment based on the assessment criteria of the Accreditation Decree of Private Higher Education 2021 (PrivH-AkkVO 2021) of the CEU PU master degree programme in "Business Analytics" | 5 |
| 2.1 Assessment criteria § 17 (1) 1 to 2: Development and quality assurance of the degree programme | 5 |
| 2.2 Assessment criteria § 17 (2) 1 to 9: Degree programme and degree programme management | 6 |
| 2.3 Assessment criteria § 17 (3) 1 to 2: Research and development and/or the advancement and appreciation of the arts | 12 |
| 2.4 Assessment criterion § 17 (4) 1 to 7: Staff | 13 |
| 2.5 Assessment criterion § 17 (5): Funding | 18 |
| 2.6 Assessment criteria § 17 (6): Infrastructure..... | 18 |
| 2.7 Assessment criterion § 17 (7): Co-operations..... | 19 |
| 3 Summary and final evaluation | 20 |
| 4 Review and assessment based on the assessment criteria of the Accreditation Decree of Private Higher Education 2021 (PrivH-AkkVO 2021) of the master degree programme in "Finance" of the Central European University Private University | 24 |
| 4.1 Assessment criteria § 17 (1) 1 to 2: Development and quality assurance of the degree programme | 24 |
| 4.2 Assessment criteria § 17 (2) 1 to 9: Degree programme and degree programme management | 25 |
| 4.3 Assessment criteria § 17 (3) 1 to 2: Research and development and/or the advancement and appreciation of the arts | 31 |
| 4.4 Assessment criterion § 17 (4) 1 to 7: Staff | 33 |
| 4.5 Assessment criterion § 17 (5): Funding | 37 |
| 4.6 Assessment criteria § 17 (6): Infrastructure..... | 38 |
| 4.7 Assessment criterion § 17 (7): Co-operations..... | 38 |
| 5 Summary and final evaluation | 39 |

6 Documents reviewed 42

1 Short information on the accreditation procedure

| Informationen zur antragstellenden Einrichtung | |
|-------------------------------------------------------------------------|------------------------------------------------|
| Antragstellende Einrichtung | Central European University Private University |
| Standort der Einrichtung | Wien |
| Rechtsform | Gesellschaft mit beschränkter Haftung |
| Erstakkreditierung | 04.07.2021 |
| Studierende im Vollausbau | 1.484 (Stand Herbst 2021) |
| Informationen zum Antrag auf Akkreditierung ‚MSc in Finance‘ | |
| Studiengangsbezeichnung | Finance |
| Studiengangsart | Masterstudiengang |
| ECTS-Anrechnungspunkte | 60 |
| Regelstudiendauer | 3 Trimester |
| Geplante Anzahl der Studienplätze | 40-60 |
| Akademischer Grad | Master of Science, abgekürzt MSc |
| Organisationsform | Vollzeit und berufsbegleitend |
| Verwendete Sprache | Englisch |
| Ort der Durchführung | Wien |
| Studiengebühr | 12.000,00 € |
| Antrag eingelangt am | 06.10.2021 |
| Informationen zum Antrag auf Akkreditierung ‚MSc in Business Analytics‘ | |
| Studiengangsbezeichnung | Business Analytics |
| Studiengangsart | Masterstudiengang |
| ECTS-Anrechnungspunkte | 60 |
| Regelstudiendauer | 3 Trimester |
| Geplante Anzahl der Studienplätze | 40-60 |
| Akademischer Grad | Master of Science, abgekürzt MSc |
| Organisationsform | Vollzeit und berufsbegleitend |
| Verwendete Sprache | Englisch |
| Ort der Durchführung | Wien |
| Studiengebühr | 15. 000,00 € |
| Antrag eingelangt am | 06.10.2021 |

The Central European Private University (CEU PU) applied for accreditation on 06.10.2022. In its decision on 02.03.2022, the Board of AQ Austria appointed the following experts for the review of the accreditation application:

On 05.04.2022, the experts and representatives of the AQ Austria conducted a site visit at the facilities of the site at which the degree programmes "Business Analytics" and "Finance" of the Central European Private University are to be offered.

| Name | Funktion & Institution | Kompetenzfeld |
|--------------------------------|-------------------------------|----------------------------------------------------------------------------------|
| Erstvorschlag | | |
| Asoc.-Prof. Ramin P. Baghai | Stockholm School of Economics | wissenschaftliche Qualifikation im Fachbereich „Finance“ |
| Univ.-Prof.Dr. Stefan Thalmann | Universität Graz | wissenschaftliche Qualifikation im Fachbereich Business Analytics |
| Dr. Patricia Feubli | FH Luzern | berufliche und wissenschaftliche Qualifikation im Fachbereich Business Analytics |
| Dr. Marlis Wallek | Artio Invest | facheinschlägiger Berufstätigkeit im Bereich Finance |
| Kevin N. Winter, MSc | TU Graz / Know-Centre | studentische Erfahrung im Fachbereich Business Analytics |

2. Review and assessment based on the assessment criteria of the Accreditation Decree of Private Higher Education 2021 (PrivH-AkkVO 2021) of the CEU PU master degree programme in "Business Analytics"

2.1 Assessment criteria § 17 (1) 1 to 2: Development and quality assurance of the degree programme

Development and quality assurance of the degree programme

- The degree programme was developed using a predefined procedure for the systematic development and establishment of degree programmes and involving the relevant stakeholders.*

CEU uses a predefined procedure for the development of degree programmes. This internal procedure is disclosed in the annexe to the accreditation documents. It includes the systematic involvement of all relevant internal stakeholders (academic staff, students, administrative staff, directors and rector) on different levels and in different phases. Accordingly, the initiative for a new degree program is discussed with the Senior Leadership Team, presented to the Academic Forum, discussed with the Senate Curriculum and Academic Quality Assurance Committee and then submitted to the Senate for approval.

However, the development of a new degree program requires not only the involvement of internal stakeholders, but also the involvement of industry as future employers of graduates, and consideration of local regulations and requirements for degree programs.

During the site visit, CEU stated that the industry is currently informally involved in the development or enhancement of new programmes. That is, CEU gathers industry feedback on the programme at annual Technology Stack meetings, during Data Science Meetups, from

feedback on capstone projects, and during one-on-one meetings with industry partners. In response to the question of industry involvement, CEU noted that it should involve the industry more formally in the future.

In the discussion during the site visit, CEU also stated that it revised the program during the transfer from Budapest to Vienna (i.e., more academics as lecturers, new local business ties etc.) and ensured that the programme complied with Austria's laws and regulations. Further, CEU stated that the degree programme was aligned with successful and established study programmes in the field and already well ranked internationally.

The experts consider 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 college's quality management system. Using an established process for quality assurance and enhancement and involving the relevant stakeholders, the private university college ensures ongoing compliance with the accreditation criteria.

According to the CEU Institutional Assessment and Quality Assurance (IAQA) Policy, each CEU degree program should incorporate appropriate planning, assessment and review elements compatible with the IAQA Policy, other CEU policies and the requirements of accrediting bodies.

This includes program specifications in accordance with CEU requirements, a process of continuous quality assessment of the program and an annual review process. The annual review is required to include a report on the implementation of the Action Plan from the previous year, trends in recruitment, admission, progression and graduation of students, achievement of program-level learning outcomes (evidenced by student's theses), student feedback (evaluations, comments from student representatives etc.) as well as an action plan for the next five years (including a research agenda, faculty hiring strategy, curriculum revision plan and an implementation timeline). CEU also encourages and - according to the discussion during the site visit - also seeks external review from both within and outside of CEU.

The outcomes of the review process are available to the Provost and the Academic Secretary (who oversee and coordinate the quality assurance and assessment of teaching and research).

The discussion with CEU during the site visit revealed that the university has examined differences between Austrian and international/US standards for quality management while moving to Vienna. According to CEU, the quality standards were already very high and the differences to the Austrian standards are not dramatic. According to CEU, this already well-established quality management system is in line with Austrian requirements and ensures compliance with the accreditation criteria.

The experts consider the criterion to be fulfilled.

2.2 Assessment criteria § 17 (2) 1 to 9: Degree programme and degree programme management

Taking into account a heterogeneous student body, the following criteria shall apply. In the case of degree programmes with special profile elements, the descriptions shall furthermore address the characteristics defining the profile. Special profile elements are, for example, compulsory vocational practice, organisational forms which are offered alongside professional activity,

distance-learning degree programmes, joint degree programmes or jointly offered degree programmes etc.

Degree programme and degree programme management

1. The degree programme is oriented towards the profile and the strategic objectives of the private university college.

According to the accreditation documents, CEU is an international research-intensive university that offers degree programmes in the humanities, social sciences, public policy, law, management and emerging fields. CEU's profile is strongly shaped by its mission: the university is interested in addressing pressing problems of our times and critically studying and supporting open societies and democracy. A special emphasis lies on ethics and democratic values.

From the documents themselves, it is not obvious how the mission is reflected in the degree program. However, in discussions during the site visit, CEU explained that the mission is omnipresent in all courses and that lecturers align the Business Analytics programme with its profile and mission by infusing courses with topic-related use cases, for example.

In the discussions during the site visit, CEU also shed some light on its strategy. In 2017, the Business School was merged with the Department of Economics and CEU has decided to engage in business education. Since colleagues from the Economics department have a strong quantitative background, CEU has also designed a business education with both a strong application orientation and a strong quantitative orientation. CEU also highlights that business education is strongly aligned with the mission and connected to the other degree programs of the university.

This is all in line with CEU's 2015 Academic and Financial Plan. Under this plan, CEU "will transform its existing professional programs in public policy, business, finance, and environmental science and direct them at self-financing mid-career and young professionals seeking an education that combines a critical grounding in open society principles with high-quality technical qualifications."

Based on this information, the "Business Analytics" degree programme fits well with CEU's profile and strategy.

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

Degree programme and degree programme management

2. The profile and intended learning outcomes of the degree programme

- a. have been clearly defined;*
- b. comprise discipline-specific-scientific and/or scientific-artistic as well as personal and social skills;*
- c. comply with the requirements of the aspired professional fields of activities and*
- d. comply with the respective qualification level of the National Qualifications Framework.*

The accreditation documents define the profile of the program as supporting the CEU mission of an open society by equipping students with the tools and methods for fact-based decision-making and to use data for business success in an ethical and socially responsible way. The curriculum provides a mix of data science, computer science and business administration skills, i.e., programming, data analysis, big data, finance and cloud computing & architecture. Those are enriched by soft skills.

The accreditation documents also clearly define program-level learning outcomes as well as module-level outcomes (i.e., learning outcomes for data analysis, data engineering, data science, data visualization and managing analytics). The program-level learning outcomes are:

- Understand key issues of data gathering and manipulation
- Successfully formulate research questions that are answerable by empirical analysis
- Understand the trade-offs of data engineering
- Appraise and select various data engineering tools, including those for the cloud and big data
- Build machine learning models with the most frequently used methods
- Apply a consistent data analysis process
- Use the R programming language for data cleaning and analysis
- Produce informative data visualizations
- Use key project management techniques

These learning outcomes leave open to some extent what kind of business understanding students acquire and how. During the site visit, CEU was able to close this gap. A discussion between CEU and Blackrock has shown that today, there is a very strong market demand for more technically oriented business skills. Consequently, CEU now focuses more on technical business understanding such as the use of BI tools. Additional business skills such as agile project management are being developed as part of the capstone project, use cases, entrepreneurial courses and seminars with practical partners. Further, students can also select specific business courses as electives such as Agile Project Management and Scrum, for example. With this clarification, the above learning objectives ensure that students are equipped with discipline-specific skills.

The development of personal and social skills is supported by the teaching philosophy, the teaching methods as well as the global classroom experience. All three encourage critical thinking, knowledge sharing and peer-to-peer learning, teamwork, cultural awareness, active listening and logical and disciplined reasoning.

A comparison of the learning objectives and module descriptions mentioned in the documents with the requirements in the job descriptions for business analysts shows that the program provides the majority of the skills required by the industry.

The intended learning outcomes comply with the qualification level VII of the National Qualifications Framework.

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

Degree programme and degree programme management

3. The name of the degree programme and the academic degree correspond to the degree programme's profile and intended learning outcomes.

Existing definitions of the term "business analytics" are similar to the definition published by Tableau: "Business analytics (BA) refers to the practice of using your company's data to anticipate trends and outcomes. BA includes data mining, statistical analysis, and predictive modelling that help make more informed decisions." (Source: <https://www.tableau.com/learn/articles/business-intelligence/bi-business-analytics>) Business

Analytics is confined to business applications. The profile of the degree program and its intended learning outcomes fit this definition, making the name "Business Analytics" appropriate.

A "Master of Science" is commonly awarded in mathematics, computer science, natural sciences, and sometimes in business and engineering degree programs with 60-120 ECTS credits. Accordingly, the academic degree corresponds to the profile and intended learning outcomes of the degree program.

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

Degree programme and degree programme management

4. The degree programme

- a. complies with the scientific and/or scientific-artistic and didactic requirements of the respective subject or subjects;*
- b. comprises defined core subject areas which represent the most important subjects of the degree programme and thus the main competencies to be acquired;*
- c. ensures by its content and structure the achievement of the intended learning outcomes;*
- d. comprises modules and/or courses with learning and teaching as well as examination methods suitable for the achievement of the intended learning outcomes and build on the overall concept of the degree programme;*
- e. takes into account the integration of research and teaching and/or research and the appreciation of the arts and*
- f. encourages the active involvement of students in the learning process*

According to the programme application, the programme balances research-based with application-oriented teaching. From a didactic perspective, lectures and seminars are used to teach sound methodological contents which are directly applied with current software to both cases from science as well as practice. Case studies, real-world data sets, and especially the Capstone project are used to achieve the intended learning outcomes. The faculty, in particular permanent faculty, are for the most part research-active and it is evident from the syllabi that the courses reflect the most recent scientific and didactic standards in the field. Thus, we conclude that the programme complies with scientific and didactic requirements.

The programme comprises clearly defined core subject areas, which cover the most important subjects of the programme. The core courses are well-designed and cover the type of content that one would expect in a one-year master programme.

The individual course syllabi contain intended learning outcomes which map into to overarching learning outcomes of the programme and key learning areas (skills) that the programme intends to convey to students. The examination methods range from (combinations of) homework, in-class presentations, and exams, to more involved applied projects (Capstone).

Research is brought into the programme in terms of relevant readings, cases and data sets. The Capstone project offers the opportunity to gain insights into applied research. Further, the teaching staff stated that research is integrated in more subtle ways, such as examples. However, CEU representatives also clearly state that this master program has an applied character and is not a research master.

Students are involved in the learning process by being encouraged to participate actively (participation and attendance are graded), and the submission of regular assignments.

In sum, the programme is sound from a methodological and technical perspective. The main subjects of business analytics are taught in the core curriculum and the strong application-

oriented character makes sure that students know how to use the learned methods. The applicability and relevance of the content are ensured through various institutional measures, such as regular interactions with the industry and especially the Capstone project. Intended, course and programme outcomes are clearly defined and students learn through a variety of different methods.

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

Degree programme and degree programme management

5. The European Credit Transfer and Accumulation System (ECTS) is applied correctly to the degree programme. The workload related to the individual modules and/or courses, expressed in ECTS credits, makes it possible that the intended learning outcomes are achieved within the stipulated duration of studies. In the case of degree programmes for working professionals, the professional activity is taken into account.

According to the programme proposal, this one-year programme has a workload of 60 ECTS credit points. Each academic year at CEU PU is divided into three terms (fall, winter and spring). Fall and Winter terms each consist of 22 ECTS within a period of 12 weeks. Given the conversion rate of 30 hours / ECTS-credit point, this results in a weekly workload of about 55 hours. The remaining 16 ECTS credit points must be earned in the spring term, which is 10 weeks long, resulting in a weekly workload of 48 hours. Even though this is within the limit, it is a substantial workload and certainly a challenge for students. Courses are worth between 2 and 4 ECTS credit points, which is at the lower end. However, this is largely due to the fact that courses are taught in 6-week blocks that are highly dependent on each other. This sequential scheduling of smaller courses allows the CEU PU to define consecutive learning outcomes more precisely. The second half of the last term (8 credit points) accounts for the capstone project. All course work has to be finished before, allowing students to focus on their project in close contact with their partner companies.

All lectures are held on two full afternoons a week. The rest of the week, students will work on regular group assignments and homework independently. This way, students are constantly evaluated on their progress, reducing the risk of individuals falling behind. The programme also allows for part-time studying, in which case the workload is halved and all lectures are taught on one afternoon per week.

The workload related to the modules and the distribution thereof across the terms allow for the achievement of the intended learning outcomes within the period of three years.

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

Degree programme and degree programme management

6. The Diploma Supplement is specific to the respective degree programme and suitable to support international mobility of students as well as graduates and facilitates academic and professional recognition of the acquired qualifications.

In the annexes to the application, CEU PU included a copy of the diploma supplement. The diploma supplement includes all necessary information.

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

Degree programme and degree programme management

7. *The requirements for admission to the degree programme*
- a. *have been clearly defined and*
 - b. *contribute to the achievement of the qualification objectives*

The general admission requirements are defined in the document "Admissions Policy and Procedures of Central European University" provided by CEU PU. This document can be found on the admissions page of CEU PU's website. Applicants for master's programmes are required to have successfully completed a four-year undergraduate degree or a Master's degree in a relevant discipline. Degrees in business, economics, statistics, computer science or other quantitative fields are accepted. Admission of candidates holding a three-year Bachelor's degree is only permitted in exceptional cases upon recommendation of the head of the department and with the endorsement by the Pro-Rector for Teaching and Learning. Additionally, they have to be proficient in English. If the first language of applicants is not English, test scores of standardised English tests like TOEFL, Cambridge English, IELTS, Pearson Test of English or Euroexam Academic must be submitted. The minimum required score for each of these tests is provided in the policy. In addition to these general requirements, the programme requires applicants to show evidence of sufficient competencies in mathematics. The programme accepts standardised math tests such as GMAT or GRE. If none of these can be provided, CEU PU offers an online math test instead. Moreover, the programme requires applicants to submit a motivation letter, two recommendation letters, and fill out the online application form. Students with a less quantitative background have to take an additional 12-week math course, held before the first term. According to the students questioned during the site visit, this preparation course is well received among students, providing them with the skills needed in the first part of their study. All the requirements are clearly defined in the policy and on the website.

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

Degree programme and degree programme management

8. *The admission procedure to the degree programme*
- a. *has been clearly defined;*
 - b. *is transparent for all involved and*
 - c. *ensures a fair selection of the applicants.*

The admission process is fully outlined in the same policy as the admission requirements and hence accessible to all applicants. The process involves the following steps: applicants need to submit all required documents as stated above. Those who fulfil the minimum requirements are invited for an interview. If no GMAT or GRE result is provided, applicants also have to take a Math test at the university. A panel then evaluates and ranks applicants according to their test results, past academic performance, the strength of recommendations, work experience in the field and motivation using a point system. The results and final decisions are documented internally. The admissions office informs applicants on whether they are admitted, placed on a waiting list, or rejected. Given the combination of the individual components, this admission procedure allows for a fair selection of a diverse group of applicants.

The experts consider the criterion to be fulfilled.

Degree programme and degree programme management

9. *The procedures for the recognition of formally, non-formally and informally acquired competencies in terms of crediting towards examinations or parts of the degree programme*
- a. *have been clearly defined*
 - b. *and are transparent for all involved.*

In the "Student Rights, Rules, and Academic Regulations", CEU PU lays out their "Credit Transfer Regulations". This document can be found on CEU PU's website. Master's students of CEU PU may transfer up to 16 ECTS credits from accredited universities. Credits from non-degree programmes may be recognised up to an amount of 4 ECTS credit points if additional conditions are met and count towards the maximum of 16 ECTS credit points. Such competencies cannot be used to satisfy mandatory degree requirements. Furthermore, the learning outcomes and the number of classroom hours must be in line with CEU PU's course. Applications are submitted to the Student Records Office and reviewed by the Dean of Undergraduate Studies at CEU PU. The application procedure is also clearly defined in the document. All transfer applications need to be submitted to the Student Record Office and approved by the Provost. The CEU PU also has many bilateral credit transfer cooperation agreements with universities both within and outside Europe, that include tables of equivalence to simplify the process of transferring credits.

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

2.3 Assessment criteria § 17 (3) 1 to 2: Research and development and/or the advancement and appreciation of the arts

Research and development and/or advancement and appreciation of the arts

1. *Subject-specific research or development activities, respectively, in compliance with the scientific standards of the respective subject or the respective subjects have been planned for the degree programme.*

The CEU is a school with a clear research focus. The core faculty involved in the Business Master program demonstrates their research focus by related publications as well as projects. However, none of the faculty conducts research on core business analytics topics, rather business analytics methods are applied to research questions from business or economics. This perfectly fits the application-oriented character of the program and ensures the take up of core topics from business and economics. Thus, the research staff does not only introduce methodological knowledge but also insights into how these methods can be applied in research.

While the programme has no thesis requirement, students can be involved in research activities on a voluntary basis. During the on-site visit, CEU representatives explained that semester projects including comprehensive project reports and especially the Capstone project offer insights into (application-oriented) research.

In sum, while the MSc Business Analytics has an applied character, research topics are clearly covered. The teaching staff is clearly research-oriented and made clear how the latest insights from research are integrated into teaching.

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

Research and development and/or advancement and appreciation of the arts

2. The permanent research and teaching staff assigned to the degree programme is involved in these research and development activities.

The Department of Economics and Business of CEU is involved in the teaching of the MSc Business Analytics. According to the application documents, the department as a whole and the individual members are actively involved in research. As mentioned above, the permanent faculty members assigned to the degree programme focus on research that applies business analytics methods to research questions from business or economics. Recruitment is done internationally and focuses on research excellence; many faculty members have received their education from top international institutions. Department members regularly publish in the known academic journals and engage with the scientific community in various ways.

The experts consider the criterion to be fulfilled.

2.4 Assessment criterion § 17 (4) 1 to 7: Staff

Staff

1. At all sites at which studies are offered in accordance with the development plan

- a. sufficient scientific or scientific-artistic teaching and research staff, respectively, has been planned for the degree programme,*
- b. the staff members are subject-specifically as well as didactically qualified according to the requirements of the respective post.*

The private university college makes sure that at least 50 per cent of the volume of teaching is covered by permanent scientific or scientific-artistic teaching and research staff, respectively. Permanent teaching and research staff means employees working at least 50 per cent of their working hours (usually at least 20 hours per week) in permanent employment at the private university college.

The curriculum comprises 102 ECTS credits (including the two remedial courses). Assuming that all courses take place each year and that the maximum teaching load per lecturer is 24 ECTS credits (equal to the default teaching load of full-time faculty members), each year a total of 4.25 lecturers would be needed to teach the complete curriculum. According to the accreditation documents, a total of 25 permanent and visiting faculty members are scheduled for teaching. Of those 25 lecturers, 9 have CEU Vienna Campus as their place of work in their employment contract with CEU. So, there are more lecturers located in Vienna and scheduled for teaching than the required absolute minimum. Hence, there is sufficient scientific teaching and research staff planned for delivering the degree programme in Vienna. Further, the CEU stated that they are willing to recruit more staff in future.

The CVs attached to the application documents as well as research papers and personal websites show that the teaching and research staff possess both the necessary subject-specific competencies and the didactic skills to deliver the courses assigned to them. During the site visit, the Head of Department stated that he would allocate teaching by the research activities

of permanent and visiting faculty members. This statement is consistent with the observations made from the documents.

Of the 102 ECTS credits, 48 ECTS credits are delivered exclusively by permanent faculty members and 6 ECTS credits are delivered by permanent faculty members and visiting faculty members together. If these 6 ECTS credits are divided equally between permanent and visiting faculty members, CEU fulfils the requirement that 50% (corresponds to 51 ECTS credits) of the teaching load is covered by permanent faculty members.

For completeness: The employment contracts reveal that the permanent faculty members scheduled to deliver the program's courses indeed work at least 20 hours per week at CEU.

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

| Staff |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>2. The subject-specific core competencies representing the most important subjects of the degree programme and thus the main competencies to be acquired are covered by</i></p> <ul style="list-style-type: none"> <i>a. permanent professors corresponding to at least one full-time equivalent as well as</i> <i>b. other permanent scientific and/or scientific-artistic teaching and research staff corresponding to at least one full-time equivalent.</i> |

Because CEU is a private university, § 17 Abs. 3 Z 3 applies. See below.

| Staff |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>3. The subject-specific core competencies representing the most important subjects of the degree programme and thus the main competencies to be acquired are covered by</i></p> <ul style="list-style-type: none"> <i>a. permanent professors corresponding to at least two full-time equivalents as well as</i> <i>b. other permanent scientific or scientific-artistic teaching or research staff, respectively, corresponding to at least one full-time equivalent.</i> <p><i>The private university college or private university shall attach CVs for existing permanently employed teaching and research staff employed to the application for programme accreditation. Furthermore, proof of this staff's extent of employment and their teaching load shall be provided.</i></p> <p><i>For permanent teaching and research staff still to be recruited, the application for programme accreditation shall be supplemented by job descriptions, stating, at least the respective post, the envisaged extent of employment, the teaching load as well as a date for the appointment.</i></p> |

The accreditation documents identify the following core subjects of the degree program:

Data Engineering 1: SQL and Different Shapes of Data

Data Engineering 2: Big Data and Cloud Computing

Data Analysis 1: Exploration - Business Analytics Track

Data Analysis 2: Finding Patterns with Regressions - Business Analytics Track

Data Analysis 3: Prediction and Introduction to Machine Learning

Coding 1: Data Management and Analysis with R

Data Science 1: Machine Learning Concepts

Data Science 3: Unstructured Text Analysis

Data Visualization 2: Practical Data Visualization with R

Those core subjects and the corresponding main competencies of the program are covered by 6 permanent faculty members and 2 visiting faculty members. Of the 6 permanent faculty

members, there are two professors corresponding to 2 full-time equivalents (FTE) as of 2022.08.01*, two assistant professors corresponding to 2 FTE as of 2022.08.01*, and two teaching staff members corresponding to 1 FTE.

**As of 2022.08.01, the working time at CEU of one of the two professors will increase from 25 hours per week (0.625 FTE) to 40 hours per week (1 FTE). Moreover, the working time at CEU of one of the assistant professors will increase from 20 hours per week (0.5 FTE) to 40 hours per week (1 FTE).*

The employment contracts with CEU reveal that the assistant professors have tenure-track contracts and the two teaching staff members have contracts with limited duration. CEU will thus need to renew these contracts in the foreseeable future to continue to cover the above core subjects with permanent faculty members.

Tenure-track contracts are standard procedure at research universities and are limited in duration by their very nature. Such contracts are a feature of universities that strive for excellence in research and teaching. Upon fulfilment of research, teaching, and citizenship requirements and the required reviews, these contracts will be converted to permanent contracts. In short, while these contracts are not "permanent" in the exact sense of the word, the contracts can be converted into permanent contracts subject to the contract holder fulfilling standard research, teaching, and citizenship requirements. In the event that tenure is not granted, a new candidate is typically recruited on the international job market for a similar tenure-track position as a replacement.

In addition, both teaching staff members appear to have been employed at CEU for some time and to have agreed to a contract extension with CEU on at least one occasion. These long-standing partnerships will likely be maintained in the future with another renewal of the employment contracts.

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

Staff

4. The composition of the adjunct and permanent teaching and research staff shall ensure a student-teacher ratio appropriate to the profile of the degree programme.

The student-professor ratio is seen as a significant indicator of the quality of the study conditions. The lower the ratio, the better.

There are 10 permanent / 8.5 FTE faculty members in the program. CEU anticipates 40 to 60 students per year per cohort. Based on FTE, this results in a students to permanent faculty ratio of 7 with 60 students and of 4.7 with 40 students (ratio of students to permanent faculty at the Department of Economics and Business equals 6.5).

This is significantly below Austria's overall ratio of students to professors (lecturers included) of 14 (figure from 2017) and somewhere in the range of the student-teacher ratio found in comparable programs at other private Austrian universities.

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

Staff

5. Adequate measures are planned for the integration of adjunct teachers into the organization of teaching and into programme organization for the degree programme.

According to the accreditation documents, there is a unit-based mentoring program for newly hired academic staff members and a procedure for the successful delivery of their new courses.

All new academic staff members participate in orientation sessions to learn about CEU, re-appointment and promotion as well as the role of the administrative staff and other units. A mentor is assigned to the newly appointed academic staff members for at least one year. The mentor introduces the new member to CEU, to get acquainted with teaching practices, the organizational structure, departmental expectations etc.

For the successful delivery of the new academic staff members' courses, the department sends a detailed description of the course to the new staff member before the beginning of the semester. The Academic Program Director or the Department Head meets with the new member to outline the program and requirements. He/she also reviews the syllabus and asks for modification if necessary. In parallel to signing the employment contract and receiving the CEU credentials, the new member receives a technical onboarding and is introduced to the CEU software and classroom equipment. The new member receives technical support in his first class and constant administrative/academic and technical support during the semester upon request.

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

Staff

6. The private university college shall allow for an appropriate balance of the teaching, research, and administrative activities of the permanent scientific or scientific-artistic staff to ensure adequate participation in teaching but also leaving sufficient time for research and development and/or the advancement and appreciation of the arts.

According to the CEU Academic Staff Handbook, all permanent faculty members are expected to engage in teaching, research and administration. The workload is normally divided according to the following approximate percentages:

- teaching (including supervision): 30-50% (default teaching load is 24 ECTS)
- research (including research management): 30-50%
- administration: 20-40%

CEU allows for different percentage definitions for individual job descriptions. E.g., for research staff, the research workload is at least 90%. In general, the above-mentioned percentages ensure a well-balanced teaching, research and administration workload.

The accreditation documents reveal that none of the permanent faculty members assigned to the degree programme exceeds the 50% limit for teaching. The teaching load is moderate in terms of ECTS credits but still time-consuming due to the intensive support of the students. According to the statement of faculty members, the teaching and supervision workload is therefore very high and significantly higher than in other educational institutions. Obviously, the head of the department pays attention to the balance between teaching, research and administration and regularly seeks discussions with the scientific/teaching staff. However, it

was added to the above statement of faculty members that despite these discussions, the high teaching workload is not yet sufficiently taken into account.

The experts consider the criterion to be fulfilled.

Recommendation: In view of the findings mentioned above, the expert group recommends CEU and the head of department to intensify the discussion on the appropriate balance, especially with those faculty members who have a teaching workload of 50%, to understand better what a teaching workload of 24 ECTS credits actually entails.

Staff

7. *Sufficient non-academic staff has been planned for the degree programme.*

From the experts' point of view, the delivery of the degree program entails some core administrative tasks:

- student-related tasks (recruitment, admission, course registration, exams, study matters, preparation for job market etc.)
- lecturer related tasks (recruitment, onboarding, course scheduling, support)
- schedule-related tasks (planning and coordination)
- teaching material (upload, updates)
- marketing
- stakeholder management (industry partners for projects and use cases, universities for exchange programs etc.)
- etc.

According to the accreditation documents, CEU provides 6 FTE of administrative support on a departmental level: program manager (marketing, stakeholder management, student preparation for job market), department coordinator (admission, accreditation), program coordinator (student and lecturer support, registration, credits and certificates, learning material), scheduling coordinator (planning, coordination), office manager (contracts of visiting faculty, support), grant coordinator (grants for faculty and students), exchange coordinator (exchange programs, coordination). These 6 FTE are partially shared with the MSc Finance programme (e.g., joint programme manager).

The degree program also receives administrative support on an institutional level: Innovation Lab (start-up support), ExEd Hub (facilitates access to high-quality professional education), admissions office (applications processing), student records office (course registrations, credits, transcripts of records, diplomas etc.), students centre (accommodation, health insurance and visa for students), career service office (career support), alumni relations office (alumni community).

The experts conclude that there is sufficient non-academic staff planned to deliver the above-mentioned core administrative tasks.

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

2.5 Assessment criterion § 17 (5): Funding

Funding

The degree programme's funding

a. is secured for a period of six years and

b. makes it possible that students complete their degree programme even in the event of its discontinuation.

The financial plan for the degree programme comprises a realistic and plausible balance of all expected revenues and expenses in connection with the planned degree programme. Financing commitments of all funding bodies listed in the financial plan shall be attached to the application.

In the accreditation documents, a signed grant letter from Open Society Foundation is added confirming a grant of 550 mEUR for the period August 1, 2020 to July 31, 2032. During the site visit, the Rector Mrs Randeria of CEU confirmed in the final session that the MSc Business Analytics programme is covered by this agreement. Furthermore, it was stated that students can complete the programme even in the event of discontinuation. In the latter case, internal processes and approvals for a discontinuation event are defined.

No financial plan related directly to the degree programme was provided, only planning information at the department level that also includes other masters and MBA programmes. The official tuition fee is 15.000€ and in the talks with CEU 10.000€ on average was mentioned as the target value. Thus assuming 50 participants (planned 40-60) this would result in 500.000€ tuition revenue per year and - in combination with the Open Society Foundation grant - should be sufficient to cover the expenses.

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

2.6 Assessment criteria § 17 (6): Infrastructure

Infrastructure

Quantitatively and qualitatively adequate facilities and equipment are provided for the degree programme at all sites at which teaching will be offered. In the case that external resources are required for the degree programme, their right of disposal has been secured and the key points thereof shall be described in the application for programme accreditation.

The study programme will accommodate 40-60 students. During the site visit at the CEU PU, the experts were invited to see classrooms, lecture halls, computer labs, study rooms, the library and a cafeteria. The campus opened in October 2019, occupying 24 606 m² across 7 floors. It offers 36 classrooms, with a seating capacity ranging from 6 to 75 with a total capacity of approximately 960 seats. There is also an Auditorium with 200 seats. The facilities are in excellent condition and quantitatively more than adequate. Lecture halls allow for interactive, multi-media supported teaching. Study rooms and computer labs are well equipped and can all be booked by any student online. Classrooms are equipped with two interactive displays. Each floor of the campus building provides multiple copiers und kitchens for students to use. Within the library area, students have access to bookable collaboration rooms and a media centre. According to the discussions during the site visit, students are also provided with all software needed in the courses. This includes access to AWS cluster instances for their course work involving Big Data.

For staff, the campus provides 138 single and 205 shared offices, with a total seating capacity of 831 as well as 15 meeting rooms.

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

2.7 Assessment criterion § 17 (7): Co-operations

Co-operation

Co-operation projects with other higher education institutions and, if applicable, partnerships with institutions outside the higher education area in Austria and abroad that match the degree programme's profile are provided for. The mobility of students and staff is being promoted.

In its accreditation documents, CEU lists its existing partnerships with other higher education institutions and non-academic institutions. However, the conversation during the site visit revealed much more information on CEU's existing and planned co-operations.

While operating in Budapest, CEU established partnerships with numerous, world-renowned companies and industry leaders (e.g., BlackRock, Emarsys Technologies, Facebook, Bosch, Deloitte, Morgan Stanley etc.). CEU's network was clearly industry-heavy and less academic, as partnerships with other Hungarian universities were challenging due to CEU's exceptional situation. Nevertheless, CEU has also been able to establish academic partnerships, especially with international universities. Some of those partnerships are listed in the accreditation documents:

- ESSEC Business School (France & Singapore)
- IPADE Business School (Mexiko)
- Antai College (China)
- Emory University (USA)
- Brandeis University (USA)
- EBS Universität für Wirtschaft und Recht (Germany)
- Hitotsubashi University (Japan)
- University of Vienna (Austria)

Most of these universities offer master's programs in the field of business analytics or in thematically related fields. They thus seem suitable for cooperation with the degree program "Business Analytics".

Despite the move from Budapest to Vienna, CEU plans to continue maintaining the existing academic and non-academic partnerships. In the conversation during the site visit, CEU announced that in the long run, it also intends to establish a similar, high-quality network in Vienna. Moreover, it seems that the discussion between the expert group and CEU has raised CEU's awareness of the need to expand academic partnerships in Austria and especially in Vienna.

Student mobility is not a core concern in this degree programme. According to CEU, there are two reasons for that: First, many students come from abroad and see the degree programme as their exchange year. Second, the degree programme is a one-year programme (for full-time students) and therefore, student mobility is much harder to implement. Hence, according to the discussion with CEU, students who want to profit from an exchange term at another university usually apply for a prolongation.

Nevertheless, the infrastructure would be in place to study abroad, if students are willing to do so and CEU offers the possibility of credit transfer. The accreditation documents state that Master's students in one-year programs can apply for a credit transfer of up to 16 ECTS credits from another university to CEU. There are credit transfer cooperation agreements with partner universities. If there is no such cooperation agreement, credit transfer requests need to be approved by the Provost.

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

3 Summary and final evaluation

(1) Development and quality assurance

The degree programme had been successfully run by CEU in Budapest and is intended to be continued in Vienna, albeit in a slightly modified form. The development of the programme followed a predefined procedure and systematically involved all relevant internal stakeholders such as academic staff, students, administrative staff, directors, and the rector. The industry was involved more informally through one-on-one meetings. CEU revised the program during the transfer from Budapest to Vienna (i.e., more academics as lecturers, new local business ties etc.) and ensured that the programme complies with Austria's laws and regulations. The program is also US accredited and also well ranked in world university rankings.

The programme's quality assurance is carried out in accordance with the requirements of CEU's "Institutional Assessment and Quality Assurance (IAQA) Policy". According to CEU, this policy is in line with Austrian requirements. Moreover, CEU emphasizes that student performance and feedback, as well as feedback from industry in particular play an important role in quality assurance.

(2) Degree programme and degree programme management

The degree programme is oriented towards the profile and strategic objectives of CEU. CEU is an international research-intensive university that offers degree programmes in the humanities, social sciences, public policy, law, management and emerging fields. The university addresses pressing problems of our times and critically studies and supports open societies and democracy. A special emphasis lies on ethic and democratic values and in the programme on responsible data science. Lecturers ensure that this mission is omnipresent in the programme by infusing courses with topic-related use cases, for example. Moreover, the program fits perfectly into the strategy of CEU to transform its existing professional programmes in public policy, business, finance and environmental science and direct them at self-financing mid-career and young professionals seeking an education that combines a critical grounding in open society principles with high quality technical qualifications.

CEU defines clear learning outcomes for the programme (such as data gathering and manipulation, building machine learning models, acquiring project management techniques and technical business understanding, for example) as well as personal and social skills (such as critical thinking, teamwork, cultural awareness, and active listening, for example) that are discipline-specific and comply with the requirements of the aspired professional fields. The name "Business Analytics" is appropriate for the programme and also known in industry as well as in the scientific community.

The content and the teaching concepts of the programme are chosen carefully and are sound from a methodological and technical perspective. The programme comprises data engineering, data analysis, coding, data science, and data visualization as clearly defined core subjects that cover the most important areas of Business Analytics. The content and the teaching methods are designed in a way that does not only ensure the active involvement of students in the learning process (by grading course attendance and participation as well as the requirement to regularly submit assignments). Content and teaching follow the principles of constructive alignment: content, teaching, learning, and examination methods (homework, in-class presentations, exams, and more involved applied projects as well as the Capstone project) are well coordinated and support the achievement of the learning outcomes. The programme has by design a very applied character and is not a research master. Nevertheless, research is brought into the programme in terms of readings, cases, data, projects (for applied research) and in more subtle ways through examples.

The workload of the programme is substantial and certainly a challenge for students. Nevertheless, it is well distributed across courses and terms and CEU offers a very supportive infrastructure for students. The courses are thought in a 6-week block format with two full afternoons of classes per week. This format allows for part-time studying, in which case the workload is halved and courses are held on only one afternoon per week. The ECTS credits are applied correctly and the achievement of the learning objectives is ensured.

CEU has defined general and programme-specific admission requirements that are made transparent to the students on the university's website. The combination of the acceptance of undergraduate four-year degrees or graduate degrees from certain quantitative disciplines, the requirement to hand in an application with a motivation letter and reference letters, English and math tests, a personal interview, and the application evaluation and ranking through a panel ensure a fair selection of the applicants. To ensure the achievement of the qualification objectives, students with a less quantitative background have to take an additional 12 weeks math course before starting with the programme. During the site visit, it was discussed that a similar course for fundamentals in business administration might be useful.

Formally and informally acquired competencies can be credited towards the programme with up to 16 ECTS credits. The corresponding rules and procedures are defined in the document "Student Rights, Rules, and Academic Regulations", which is available to the students.

(3) Research and development

CEU is a university with a clear research focus and has an excellent faculty. Many faculty members have received their education from top international institutions. Department members regularly publish in the known academic journals and engage with the scientific community in various ways. None of the permanent faculty members conducts research on core business analytics topics, they rather apply business analytics methods to research questions from business or economics. This perfectly fits the application-oriented character of the program and ensures the take up of core topics from business and economics.

(4) Staff

There is enough research and teaching staff located in Vienna to deliver the courses on-site. Teaching is allocated to teaching staff by their research and professional activities. The submitted documents confirm this good match, the teaching staff possesses both the necessary subject-specific competencies and the didactic skills to deliver the courses assigned to them. The permanent faculty members are assigned to the programme as required. They deliver 50%

of the total teaching load and the majority of the programme's core subjects. The latter are covered by two professors corresponding to 2 FTE, two assistant professors corresponding to 2 FTE, and two teaching staff members corresponding to 1 FTE. Adjunct teachers or new visiting faculty members are integrated adequately. They participate in orientation sessions, intensively discuss the syllabi of their course with the department, get technical support, and are supported by mentors who introduce them to CEU, teaching practices, organizational structures, departmental expectations etc.

The expected student-professor ratio lies between 7 (with 60 students) and 4.6 (with 40 students) and is significantly below Austria's average of 14 (figure from 2017).

Despite the low student-professor ratio, permanent faculty members point out a relatively high teaching load. In general, the standard division of the workload into 30-50% teaching (default teaching load is 24 ECTS credits), 30-50% research and 20-40% administration ensures an appropriate balance of teaching, research and administrative activities. However, the teaching load is time-consuming due to the intensive support of the students. According to faculty members, this is not yet sufficiently taken into account.

The expert group, therefore, recommends to CEU and the head of department to intensify the discussion on the appropriate balance, especially with those faculty members who have a teaching workload of 50%, to better understand what a teaching workload of 24 ECTS credits actually entails.

To support the programme in administrative tasks, CEU provides 6 FTE of administrative support on a departmental level. Those 6 FTE are partially shared with the MSc Finance programme. This workforce is sufficient to cover student-related tasks (recruitment, admission, course registration, exams, study matters, preparation for job market etc.), lecturer related tasks (recruitment, onboarding, course scheduling, support), schedule-related tasks (planning and coordination), teaching material (upload, updates), marketing, stakeholder management (industry partners for projects and use cases, universities for exchange programs etc.) etc.

(5) Funding

No financial plan related directly to the degree programme was provided, only planning information at the department level that also includes other masters and MBA. However, a signed grant letter from Open Society Foundation is available that confirms a grant of 550 mEUR for the period Aug. 1, 2020 to July 31, 2032. In the personal meeting the Rector Mrs Randeria of CEU confirmed in the final session that the MSc Business Analytics programme is covered by this agreement. Furthermore, it was stated that students can complete the programme even in the event of discontinuation. In the latter case, internal processes and approvals for a discontinuation event are defined.

(6) Infrastructure

CEU's facilities in Vienna are in excellent condition, quantitatively more than adequate, and designed for multimedia teaching. Students are provided with the required software including access to AWS cluster instances for their course work involving Big Data.

(7) Co-operation

While operating in Budapest, CEU established partnerships with numerous, world-renowned companies and industry leaders (e.g., BlackRock, Emarsys Technologies, Facebook, Bosch, Deloitte, Morgan Stanley etc.) and academic partnerships, especially with international

universities. Most of these universities offer master's programs in the field of business analytics or in thematically related fields.

Despite the move from Budapest to Vienna, CEU plans to continue maintaining the existing academic and non-academic partnerships. Moreover, CEU intends to establish a similar, high-quality network in Vienna and to expand local academic partnerships.

Even though student mobility is not a core concern in this one-year degree programme, the infrastructure would be in place to study abroad, if students are willing to do so and CEU offers the possibility of credit transfer.

Taking into account all submitted accreditation documents and the informative and cooperative discussions with the CEU on site, the experts **recommend the accreditation** of the degree programme.

The experts **recommend** to the Board of AQ Austria the accreditation of the degree programme "Business Analytics" of the Central European University Private University.

Pro Memoria - **Recommendations:**

The expert group recommends that CEU and the head of department intensify the discussion on the appropriate balance of teaching, research, and administration, especially with those faculty members who have a teaching workload of 50%, to better understand what teaching workload of 24 ECTS credits actually entails.

4 Review and assessment based on the assessment criteria of the Accreditation Decree of Private Higher Education 2021 (PrivH-AkkVO 2021) of the master degree programme in "Finance" of the Central European University Private University Assessment criteria § 17 (1) 1 to 2: Development and quality assurance of the degree programme

Development and quality assurance of the degree programme

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

The development of the degree programme was triggered by market needs (demand for post-graduate business programmes specialized in one functional area and for more flexible offerings) as described in the CEU programme proposal. According to the CEU, predefined procedures were followed in the development and establishment of the degree programme comprising CEU internal submission and approval processes, followed by registration and accreditation procedures with external institutions. It includes the systematic involvement of all relevant internal stakeholders (academic staff, students, administrative staff, directors and rector) on different levels and in different phases. During the site visit, the CEU representatives mentioned the close cooperation between the responsible professors with long teaching experience during the programme development. The requirements for applicability of the programme to industry needs are gained in particular from exchanges with future employers (CEU built up a network of companies participating in the students' capstone projects as well as in presentations/seminars at the CEU campus) and CEU's teaching instructors from industry. There is also an annual meeting with the MSc in Finance Advisory Committee with industry representatives; however, most input from industry during programme development was gathered from one-to-one conversations as outlined in the personal meeting. Therefore, the programme was developed using a predefined procedure and involved all relevant groups within the university.

The experts consider 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 college's quality management system. Using an established process for quality assurance and enhancement and involving the relevant stakeholders, the private university college ensures ongoing compliance with the accreditation criteria.

According to the CEU accreditation document, the quality assurance process of the degree programme follows the University's general rules: the degree programme is subject to a process of continuous assessment of the programme quality, especially in terms of achieving the programme's learning outcomes. Furthermore, an annual review process dealing with the quality and outcomes of the programme is mentioned. This seems to be more of narrative

nature as learned during the site visit. In the personal meeting with CEU representatives, the impression was gained that measurable quality indicators result especially from students' course evaluations as well as from employment indicators of CEU Master's programme graduates (students' placement rate and reputation of employers). Further actions to receive feedback from students regarding the degree programme are town hall meetings with students and CEU personnel. In order to increase the students' understanding of the course content, an additional weekly class can be attended voluntarily to clarify questions. CEU explicitly mentions the MSc in Finance Advisory Committee as industry consulting partner in the quality assurance processes. As learned during the site visit, the committee meets once a year. The CEU relies strongly on industry feedback from their own lecturers with industry background and one-to-one meetings with their company network partners.

Reviews may lead to adjusting the programme specifications, the planned number of students, etc. The types of changes and rules for informing the accreditation authority are clearly defined.

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

Recommendation: The MSc of Finance Advisory Committee is a working group of senior executives offering professional guidance. Its inputs are highly valuable. Therefore, the expert group recommends to specify how the Committee is involved in the further development and quality assurance of the programme.

4.2 Assessment criteria § 17 (2) 1 to 9: Degree programme and degree programme management

Taking into account a heterogeneous student body, the following criteria shall apply. In the case of degree programmes with special profile elements, the descriptions shall furthermore address the characteristics defining the profile. Special profile elements are, for example, compulsory vocational practice, organisational forms which are offered alongside professional activity, distance-learning degree programmes, joint degree programmes or jointly offered degree programmes etc.

Degree programme and degree programme management

1. The degree programme is oriented towards the profile and the strategic objectives of the private university college.

According to the accreditation documents, the Central European University (CEU) is an international research-intensive university that offers degree programmes in the humanities, social sciences, public policy, law, management and emerging fields. It is an institution of advanced research and teaching, dedicated to socially and morally responsible intellectual inquiry. It is committed to promoting the values of open society and self-reflective critical thinking. During the site visit, the CEU shed some additional light on its strategy. In 2017, the Business School was merged with the Department of Economics. This enables the CEU to design a business education with a strong quantitative orientation, building on the strong quantitative background of the faculty of the Economics department. The CEU's merged Department of Economics and Business has recently recruited additional faculty members with a strong

research background in Finance, such as Associate Professor Andras Danis who joined the CEU from Georgia Tech in the U.S. This enables the school to grow their research excellence on the empirical side while building on the existing strengths and reputation it has in fields such as behavioural economics and finance theory. At the same time, the more recent recruits in Finance enable the school to deliver an effective MSc Finance programme.

While the MSc in Finance programme is a relatively applied programme that primarily aims to prepare students for industry jobs, it is clear from the application documents and the discussion during the site visit that the programme is aligned with the profile and the strategic objectives of the CEU. For example, in this programme as in others, the CEU aims to provide students a global classroom experience with students from a wide variety of countries, including developing countries. The CEU puts significant effort into recruiting students from a very broad range of countries and social backgrounds. The education offered also touches upon many global topics, for example through the use of international case studies describing business challenges from all over the world. It is also noteworthy that the programme includes a compulsory Ethics course, which is aligned with the CEU's mission and is lacking in many Finance programmes at other universities. At the site visit, it was mentioned that the Department is considering the introduction of a Sustainable Finance course; we view this as an excellent idea for the future, which would further broaden the course offering and further align the MSc Finance programme with CEU's mission.

While the MSc in Finance is primarily aimed at students who want to work in the industry rather than those that want to pursue a PhD or work in academia, the CEU's research focus also permeates this programme. At the site visit, we were informed that the Department Head allocates courses according to faculty research expertise, to the extent that this is practically feasible. This also broadly matches the impression we have from looking at the course syllabi. This matching of faculty to courses based on research expertise ensures that courses include cutting-edge content and that students are made aware of open research questions and puzzles in the field. This less dogmatic, research-driven teaching approach fosters problem-solving skills and an open student mind-set, which is in line with the CEU mission.

In sum, the MSc Finance degree programme seems to fit well with CEU's profile and strategy and we deem the criterion §17 (2) 1 to be fulfilled.

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

Degree programme and degree programme management

2. *The profile and intended learning outcomes of the degree programme*
 - a. *have been clearly defined;*
 - b. *comprise discipline-specific-scientific and/or scientific-artistic as well as personal and social skills;*
 - c. *comply with the requirements of the aspired professional fields of activities and*
 - d. *comply with the respective qualification level of the National Qualifications Framework.*

The accreditation documents clearly define the profile of the programme as a specialized business Master's programme offering an academically rigorous professional curriculum designed and taught in cooperation with the industry. The application states that it is designed to equip students with deep subject-matter expertise in Finance as well as strong analytical and technology skills. The aim is for students to immediately apply the skills acquired during their studies. The programme also aims to promote the development of communication,

interpersonal and presentation skills, leadership and management skills, an entrepreneurial mind-set, career and personal awareness, cultural sensitivity, and ethical conduct.

Intended learning outcomes at the programme level are clearly defined in the programme application. The programme allows students to choose from four specialization modules (investments and banking; financial management; innovation and fintech; data tools and analysis). Module-level learning outcomes are clearly defined and listed in the application.

From the point of view of the reviewers, these learning objectives ensure that students are equipped with discipline-specific skills.

The development of personal and social skills is supported by the teaching philosophy as well as the teaching methods. Both encourage critical thinking, knowledge sharing and peer-to-peer learning, teamwork, cultural awareness, active listening, and logical and disciplined reasoning. This type of learning is fostered, for example, through the global classroom experience, enabled by the global sourcing of students with various social backgrounds; through the Capstone project, in which students interact with industry representatives and faculty to advise on a concrete practical problem with relevance to the coursework; and small class sizes that encourage teamwork and collaboration.

Based on the programme application, including the course syllabi and the discussions with the CEU during the site visit, it is the reviewers' view that the programme provides the relevant skills required by the Finance industry (for a variety of job profiles ranging from asset management to corporate finance). It is worth pointing out that the programme content and intended learning outcomes are developed in close collaboration between faculty and industry. The MSc Finance programme has an advisory board that contains industry partners. This board regularly reviews the programme content and is a useful resource for faculty to determine which specific skills are required by the industry. A regular seminar series ("Finance@CEU") featuring high-ranking industry representatives exposes students to topical industry questions and challenges. The use of case studies in most courses is another way in which the programme ensures that the content taught is applicable by students to real-life questions of the industry. The students acquire considerable practical skills in the compulsory Capstone project, in which they are matched to a company and solve real-life problems. Finally, the large number of electives offered to students, which are often taught by experienced lecturers with industry experience, also provide students with a range of readily applicable yet rigorous Finance skills.

The profile and intended learning outcomes comply with the qualification level VII of the National Qualifications Framework.

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

Degree programme and degree programme management

3. The name of the degree programme and the academic degree correspond to the degree programme's profile and intended learning outcomes.

The degree programme Finance refers to a Master's programme with awarded degree "Master of Science (MSc)". The Degree Programme comprises various courses in all relevant topics in Finance (Investments & Banking, Financial Management, Innovation & Fintech, Data Tool & Analytics) as outlined in the programme's profile. The mentioned cooperation with Industry in the programme's profile is ensured by finance use case seminar series named Finance@CEU exchange and individual capstone consulting projects.

A "Master of Science" is commonly awarded in mathematics, computer science, natural sciences, and sometimes in business and engineering degree programmes with 60-120 ECTS credits. Accordingly, the academic degree corresponds to the profile and intended learning outcomes of the degree program.

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

Degree programme and degree programme management

4. The degree programme

- a. complies with the scientific and/or scientific-artistic and didactic requirements of the respective subject or subjects;
- b. comprises defined core subject areas which represent the most important subjects of the degree programme and thus the main competencies to be acquired;
- c. ensures by its content and structure the achievement of the intended learning outcomes;
- d. comprises modules and/or courses with learning and teaching as well as examination methods suitable for the achievement of the intended learning outcomes and build on the overall concept of the degree programme;
- e. takes into account the integration of research and teaching and/or research and the appreciation of the arts and
- f. encourages the active involvement of students in the learning process

According to the programme application, the programme balances research-based teaching with practice-based applied teaching and learning. The teaching is both lecture-based and also includes real-life applications through the use of case studies, real-world data analysis, relevant readings, and the Capstone project, for example. The faculty, in particular permanent faculty, are for the most part very research-active and it is evident from the syllabi that the courses reflect the most recent scientific and didactic standards of the field of Finance. The programme complies with scientific and didactic requirements for the Finance subject area.

The programme comprises clearly defined core subject areas, which cover the most important subjects of the programme. The core courses are well designed and cover the type of content that one would expect in a good Finance graduate programme.

The individual course syllabi contain intended learning outcomes which map into to overarching learning outcomes of the programme and key learning areas (skills) that the programme intends to convey to students. The examination methods range from (combinations of) homework, in-class presentations, exams, to more involved applied projects (Capstone).

Research is brought into the programme through a variety of means. While the programme has no thesis requirement, students can be involved in research activities on a voluntary basis (and according to information received during the site visit, several students choose to be involved in such activities); furthermore, the Capstone project can at times include more research-driven

approaches to solving problems faced by companies. More relevantly, research is introduced into the teaching by faculty in more subtle ways. Based on the site visit, it is clear that the Department Head allocates courses according to faculty research expertise, to the extent that this is practically feasible. This also broadly matches the impression we have from studying the course syllabi. This matching of faculty to courses based on research expertise ensures that courses include cutting edge content and that students are made aware of open research questions and puzzles in the field.

Students are actively involved in the learning process by being encouraged to participate actively (participation and attendance are graded), and the submission of regular assignments.

In sum, the programme is sound from a methodological and technical perspective. The main subjects of Finance are taught in the core curriculum and the wide range of elective courses enables students to specialize. The applicability and relevance of the content is ensured through various institutional measures, such as regular interactions with the industry advisory board, Capstone project, and more applied elective courses. Research is integrated into the programme to the extent that this is possible and advisable, given the applied nature of the programme. Intended course and programme outcomes are clearly defined and students learn through a variety of different methods.

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

Degree programme and degree programme management

5. The European Credit Transfer and Accumulation System (ECTS) is applied correctly to the degree programme. The workload related to the individual modules and/or courses, expressed in ECTS credits, makes it possible that the intended learning outcomes are achieved within the stipulated duration of studies. In the case of degree programmes for working professionals, the professional activity is taken into account.

According to the programme proposal, this one-year programme has a workload of 60 ECTS credit points. Each academic year at CEU PU is divided into three terms (fall, winter and spring). Fall and Winter terms each consist of 22 ECTS within a period of 12 weeks. Given the conversion rate of 30 hours / ECTS credit point, this results in a weekly workload of about 55 hours. The remaining 16 ECTS credit points must be earned in the spring term, which is 10 weeks long, resulting in a weekly workload of 48 hours. Even though this is within the limit, it is a substantial workload and certainly a challenge for students. Courses are worth between 2 and 4 ECTS credit points, which is at the lower end. However, this is largely due to the fact that courses are taught in 6-week blocks that are highly dependent on each other. This sequential scheduling of smaller courses allows the CEU PU to define consecutive learning outcomes more precisely. The second half of the last term (8 credit points) accounts for the capstone project. All course work has to be finished before, allowing students to focus on their project in close contact with their partner companies.

All lectures are held on two full afternoons a week. The rest of the week, students will work on regular group assignments and homework independently. This way, students are constantly evaluated on their progress, reducing the risk of individuals falling behind. The programme also allows for part-time studying, in which case the workload is halved and all lectures are taught on one afternoon per week.

The workload related to the modules and the distribution thereof across the terms allows for the achievement of the intended learning outcomes within the period of three years.

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

Degree programme and degree programme management

6. The Diploma Supplement is specific to the respective degree programme and suitable to support international mobility of students as well as graduates and facilitates academic and professional recognition of the acquired qualifications.

The Diploma Supplement as provided in the application documents as a sample summarizes the main information identifying the qualification, information on the level of the qualification, information on the Master's programme's contents and results gained, information on the function of the qualification, certification and individual grades of the student.

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

Degree programme and degree programme management

7. The requirements for admission to the degree programme
a. have been clearly defined and
b. contribute to the achievement of the qualification objectives

The general admission requirements are defined in the document "Admissions Policy and Procedures of Central European University" provided by CEU PU. This document can be found on the admissions page of CEU PU's website. Applicants for master's programmes are required to have successfully completed a four-year undergraduate degree or a Master's degree in a relevant discipline. Degrees in business, economics, statistics, computer science or other quantitative fields are accepted. Admission of candidates holding a three-year Bachelor's degree is only permitted in exceptional cases upon recommendation of the head of the department and with the endorsement by the Pro-Rector for Teaching and Learning. Additionally, they have to be proficient in English. If the first language of applicants is not English, test scores of standardised English tests like TOEFL, Cambridge English, IELTS, Pearson Test of English or Euroexam Academic must be submitted. The minimum required score for each of these tests is provided in the policy. In addition to these general requirements, the programme requires applicants to show evidence of sufficient competencies in mathematics. The programme accepts standardised math tests such as GMAT or GRE. If none of these can be provided, CEU PU offers an online math test instead. Moreover, the programme requires applicants to submit a motivation letter, two recommendation letters, and fill out the online application form. Students with a less quantitative background have to take an additional 12-week math course, held before the first term. According to the students questioned during the site visit, this preparation course is well received among students, providing them with the skills needed in the first part of their study. All the requirements are clearly defined in the policy and on the website.

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

Degree programme and degree programme management

8. *The admission procedure to the degree programme*
- a. *has been clearly defined;*
 - b. *is transparent for all involved and*
 - c. *ensures a fair selection of the applicants.*

The admission process is fully outlined in the same policy as the admission requirements and hence accessible to all applicants. The process involves the following steps: applicants need to submit all required documents as stated above. Those who fulfil the minimum requirements are invited for an interview. If no GMAT or GRE result is provided, applicants also have to take a Math test at the university. A panel then evaluates and ranks applicants according to their test results, past academic performance, the strength of recommendations, work experience in the field and motivation using a point system. The results and final decisions are documented internally. The admissions office informs applicants on whether they are admitted, placed on a waiting list, or rejected. Given the combination of the individual components, this admission procedure allows for a fair selection of a diverse group of applicants.

The experts consider the criterion to be fulfilled.

Degree programme and degree programme management

9. *The procedures for the recognition of formally, non-formally and informally acquired competencies in terms of crediting towards examinations or parts of the degree programme*
- a. *have been clearly defined*
 - b. *and are transparent for all involved.*

In the "Student Rights, Rules, and Academic Regulations", CEU PU lays out their "Credit Transfer Regulations". This document can be found on CEU PU's website. Master's students of CEU PU may transfer up to 16 ECTS credits from accredited universities. Credits from non-degree programmes may be recognised up to an amount of 4 ECTS credit points if additional conditions are met and count towards the maximum of 16 ECTS credit points. Such competencies cannot be used to satisfy mandatory degree requirements. Furthermore, the learning outcomes and the number of classroom hours must be in line with CEU PU's course. Applications are submitted to the Student Records Office and reviewed by the Dean of Undergraduate Studies at CEU PU. The application procedure is also clearly defined in the document. All transfer applications need to be submitted to the Student Record Office and approved by the Provost. The CEU PU also has many bilateral credit transfer cooperation agreements with universities both within and outside Europe, that include tables of equivalence to simplify the process of transferring credits.

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

4.3 Assessment criteria § 17 (3) 1 to 2: Research and development and/or the advancement and appreciation of the arts

Research and development and/or advancement and appreciation of the arts

1. Subject-specific research or development activities, respectively, in compliance with the scientific standards of the respective subject or the respective subjects have been planned for the degree programme.

The CEU is a school with a strong research focus. Evidenced by the CVs of the core faculty of the Department of Economics and Business, the research-related achievements stand out and range from prestigious grants, publications, to PhDs obtained from top international research universities. Given the school's research focus, the MSc Finance is a unique programme as it is quite applied and emphasizes industry relevance. Despite this, research is incorporated into the programme through a variety of means.

While the programme has no thesis requirement, students can be involved in research activities on a voluntary basis (according to information received on-site, several students do choose to be involved in such activities through independent study, guided by faculty); furthermore, the Capstone project can at times include more research-driven approaches to solving problems of the company sponsors.

More relevantly, research is introduced into the teaching by faculty. Based on the on-site visit, it is clear that the Department Head allocates courses according to faculty research expertise, to the extent that this is practically feasible. This also broadly matches the impression we have from studying the course syllabi. This matching of faculty to courses based on research expertise ensures that courses include cutting edge content and that students are made aware of open research questions and puzzles in the field. The Department has a clearly defined research strategy which is outlined in detail in Annex 2.3 of the application documents. It clearly delineates complementarities between the MSc core faculty's research and teaching. The research interests of the relevant faculty cover the major fields of Finance. For example, Andras Danis works on Corporate Finance topics such as the capital structure choices of firms. Tomy Lee works on trading systems and fintech. Paul Voss has several papers on corporate control, while Ibolya Schindele is an expert on banking.

In sum, while the MSc Finance is not a research degree, the programme contents are up to the most recent standards of the discipline and include subject-specific research to the extent that this is practicable in an applied programme like the MSc Finance programme.

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

Research and development and/or advancement and appreciation of the arts

2. The permanent research and teaching staff assigned to the degree programme is involved in these research and development activities.

The Department of Economics and Business of CEU is involved in the teaching of the MSc Finance programme. It is clear from the faculty pages that this is a very research-active department. Recruitment is done internationally and focuses on research excellence; many faculty members have received their PhDs from the top international institutions in the field, such as Harvard University, London School of Economics, Princeton, and MIT. Department members regularly publish in the top academic journals in the field of Finance and Economics. For example, the Head of the MSc in Finance programme who also teaches in the programme, Andras Danis, has, among other publications, three articles in the Journal of Financial Economics, one of the top three journals in the field of Finance. In short, this is a very research-active department, which recruits its faculty members on the international job market. The

faculty members actively contribute to the research in the field of Finance and are involved through teaching and research-related activities in the MSc Finance programme.

The experts consider the criterion to be fulfilled.

4.4 Assessment criterion § 17 (4) 1 to 7: Staff

| Staff |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>1. At all sites at which studies are offered in accordance with the development plan</i></p> <ul style="list-style-type: none"> <i>a. sufficient scientific or scientific-artistic teaching and research staff, respectively, has been planned for the degree programme,</i> <i>b. the staff members are subject-specifically as well as didactically qualified according to the requirements of the respective post.</i> <p><i>The private university college makes sure that at least 50 per cent of the volume of teaching is covered by permanent scientific or scientific-artistic teaching and research staff, respectively. Permanent teaching and research staff means employees working at least 50 per cent of their working hours (usually at least 20 hours per week) in permanent employment at the private university college.</i></p> |

The MSc Finance curriculum offers 148 ECTS credits in total (including 14 ECTS in remedial courses), of which 92 ECTS credits (62% of total) are taught by resident faculty that is working at least 50% of their working hours (at least 20 hours per week) in permanent or multi-year fixed-term employment at the CEU and the CEU Vienna Campus as their place of work. There are ten such faculty members of CEU that are teaching in the MSc Finance programme.

The CVs attached to the application documents show that the teaching and research staff have both the necessary subject-specific competencies and skills to deliver the courses assigned to them. While some elective courses are staffed by adjunct faculty that have less academic training than CEU's core faculty, the CEU's otherwise careful selection of teaching staff and faculty (which is evident from the faculty CVs and discussions during the site visit) suggests that these individuals also have the necessary skills and additionally bring some unique perspectives (e.g., from industry experience) on the taught subjects. Furthermore, there appears to be a quite limited turnover in adjunct staff.

The default teaching load per year and faculty member is 24 ECTS, with some faculty members having lower teaching loads due to administrative duties (e.g., the Head of the MSc Finance programme, Andras Danis, teaches 12 ECTS). The teaching load is moderate in terms of ECTS credits but still time-consuming because of the intensive support of the students.

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

| Staff |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>2. The subject-specific core competencies representing the most important subjects of the degree programme and thus the main competencies to be acquired are covered by</i></p> <ul style="list-style-type: none"> <i>a. permanent professors corresponding to at least one full-time equivalent as well as</i> <i>b. other permanent scientific and/or scientific-artistic teaching and research staff corresponding to at least one full-time equivalent.</i> |

Because CEU is a private university, § 17 Abs. 3 Z 3 applies. See below.

| Staff |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>3. The subject-specific core competencies representing the most important subjects of the degree programme and thus the main competencies to be acquired are covered by</i></p> <p style="padding-left: 40px;"><i>a. permanent professors corresponding to at least two full-time equivalents as well as</i></p> <p style="padding-left: 40px;"><i>b. other permanent scientific or scientific-artistic teaching or research staff, respectively, corresponding to at least one full-time equivalent.</i></p> <p><i>The private university college or private university shall attach CVs for existing permanently employed teaching and research staff employed to the application for programme accreditation. Furthermore, proof of this staff's extent of employment and their teaching load shall be provided.</i></p> <p style="padding-left: 40px;"><i>For permanent teaching and research staff still to be recruited, the application for programme accreditation shall be supplemented by job descriptions, stating, at least the respective post, the envisaged extent of employment, the teaching load as well as a date for the appointment.</i></p> |

The accreditation documents identify the following core subjects of the MSc Finance curriculum (from Table 1 in the programme application):

Financial Management (4 ECTS)
 Economic Foundations of Finance (4 ECTS)
 Ethics in Finance (1 ECTS)
 Finance Use Case Seminars (2 ECTS)
 Asset Pricing (4 ECTS)
 Banking & Financial Institutions (4 ECTS)
 Trading & Portfolio Theory (4 ECTS)
 Corporate Finance & Risk Management (4 ECTS)
 Capstone Project Writing for Finance (2 ECTS)
 Capstone Project Seminar for Finance (2 ECTS)
 Capstone Project (4 ECTS)

Based on an examination of the course syllabi and the programme application documents, the core course contents cover the most important subjects of Finance. Out of the 35 ECTS credits in these mandatory courses, the core subjects and the corresponding main competencies of the programme are taught by four full-time research faculty members, one part-time permanent lecturer (10 ECTS), and one visiting lecturer (1 ECTS).*

Of the four full-time research faculty members, there are two associate professors (tenured and on indefinite contracts) corresponding to 2 full-time equivalents (FTE) as of 2022.08.01**, and two assistant professors (on tenure-track contracts) corresponding to 2 FTE with standard fixed-term, tenure-track contracts until July 2024 and July 2027, respectively.*** The other core courses are covered by Ibolya Schindele (a part-time permanent lecturer on a fixed-term contract starting in August 2022 and ending in July 2025) and Peter Juhasz (a recurrent visiting lecturer).

In sum, we consider criterion §17 (4) 3 to be fulfilled.

*Schindele (part-time permanent/resident lecturer employed for 20 hours per week at CEU) teaches Economic Foundations of Finance, Capstone Project Writing, and Banking and Financial Institutions; Juhasz (a visiting lecturer) teaches Ethics in Finance.

**As of 2022.08.01, the working time at CEU of one of the two associate professors will increase from 25 hours per week (0.625 FTE) to 40 hours per week (1 FTE).

***Tenure-track contracts are standard procedure at research universities and are limited in duration by their very nature. Such contracts are a feature of universities that strive for excellence in research and teaching. Upon fulfilment of research, teaching, and citizenship requirements and the required reviews, these contracts will be converted to permanent contracts. In short, while these contracts are not "permanent" in the exact sense of the word, the contracts can be converted into permanent contracts subject to the contract holder fulfilling standard research, teaching, and citizenship requirements. In the event that tenure is not granted, a new candidate is typically recruited on the international job market for a similar tenure-track position as a replacement.

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

| Staff |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4. <i>The composition of the adjunct and permanent teaching and research staff shall ensure a student-teacher ratio appropriate to the profile of the degree programme.</i> |

The student-professor ratio is a significant indicator for the quality of the study conditions. The lower the ratio, the better.

According to Table 3b in the application documents, the core faculty members teaching in the programme correspond to 9.5 FTE. The CEU anticipates 40 to 60 students per year per cohort in the MSc Finance programme. Based on the core faculty, this results in a students-to-faculty ratio of around 6 with 60 students and of around 4 with 40 students. The ratio is even lower if visiting faculty members that teach many of the elective courses are taken into account. This is significantly below Austria's overall ratio of students to professors (lecturers included) of 14 (figure from 2017).

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

| Staff |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. <i>Adequate measures are planned for the integration of adjunct teachers into the organization of teaching and into programme organization for the degree programme.</i> |

According to the accreditation documents, there is a unit-based mentoring programme for newly hired academic staff members and a procedure for the successful delivery of their new courses.

All new academic staff members participate in orientation sessions to learn about CEU, re-appointment and promotion as well as the role of the administrative staff and other units. A mentor is assigned to the newly appointed academic staff members for at least one year. The mentor introduces the new member to CEU, to get acquainted with teaching practices, the organizational structure, departmental expectations etc.

For the successful delivery of the new academic staff members' courses, the department sends a detailed description of the course to the new staff member before the beginning of the

semester. The academic Program Director or the Department Head meets with the new member to outline the program and requirements. He also reviews the syllabus and asks for modifications if necessary. In parallel to signing the employment contract and receiving the CEU credentials, the new member receives a technical onboarding and is introduced to the CEU software and classroom equipment. The new member receives technical support in his first class and constant administrative/academic and technical support during the semester upon request.

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

| Staff |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>6. The private university college shall allow for an appropriate balance of the teaching, research, and administrative activities of the permanent scientific or scientific-artistic staff to ensure adequate participation in teaching but also leaving sufficient time for research and development and/or the advancement and appreciation of the arts.</i> |

According to the CEU Academic Staff Handbook, all permanent faculty members are expected to engage in teaching, research, and administration. The workload is normally divided according to the following approximate percentages:

- teaching (including supervision): 30-50% (default teaching load is 24 ECTS)
- research (including research management): 30-50%
- administration: 20-40%

CEU allows for different percentage definitions for individual job descriptions. For example, for research staff, the research workload is at least 90%. In general, the above-mentioned percentages ensure a well-balanced teaching, research and administration workload.

The default teaching load per year and faculty member is 24 ECTS, with some faculty members having lower teaching loads due to administrative duties (e.g., the Head of the MSc Finance programme currently teaches 12 ECTS per annum). The teaching load is moderate in terms of ECTS credits but still time-consuming because of the intensive support of the students.

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

| Staff |
|------------------------------------------------------------------------------------|
| <i>7. Sufficient non-academic staff has been planned for the degree programme.</i> |

From the experts' point of view, the delivery of the degree programme entails some core administrative tasks:

- student-related tasks (recruitment, admission, course registration, exams, study matters, preparation for the job market etc.)
- lecturer related tasks (recruitment, onboarding, course scheduling, support)
- schedule-related tasks (planning and coordination)
- teaching material (upload, updates)
- marketing

- stakeholder management (industry partners for projects and use cases, universities for exchange programs etc.)
- etc.

According to the accreditation documents, the CEU provides 6 FTE of administrative support on a departmental level: programme manager (marketing, stakeholder management, student preparation for job market), department coordinator (admission, accreditation), programme coordinator (student and lecturer support, registration, credits and certificates, learning material), scheduling coordinator (planning, coordination), office manager (contracts of visiting faculty, support), grant coordinator (grants for faculty and students), exchange coordinator (exchange programs, coordination).

These 6 FTE are partially shared with the MSc Business Analytics programme (e.g., joint programme manager).

The degree programme also receives administrative support on an institutional level: Innovation Lab (startup support), ExEd Hub (facilitates access to high-quality professional education), admissions office (applications processing), student records office (course registrations, credits, transcripts of records, diplomas etc.), students centre (accommodation, health insurance and visa for students), career service office (career support), alumni relations office (alumni community).

The Capstone project, a core asset of the MSc Finance programme, is additionally overseen by Ibolya Schindele who is permanently employed part-time by CEU (20 hours per week) and also teaches courses in the MSc Finance programme.

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

4.5 Assessment criterion § 17 (5): Funding

| Funding |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>The degree programme's funding</i></p> <p style="margin-left: 20px;"><i>a. is secured for a period of six years and</i></p> <p style="margin-left: 20px;"><i>b. makes it possible that students complete their degree programme even in the event of its discontinuation.</i></p> <p><i>The financial plan for the degree programme comprises a realistic and plausible balance of all expected revenues and expenses in connection with the planned degree programme. Financing commitments of all funding bodies listed in the financial plan shall be attached to the application.</i></p> |

In the accreditation documents, a signed grant letter from the Open Society Foundation is added confirming a grant of 550 mEUR for the period Aug. 1, 2020 to July 31, 2032. In the personal meeting During the site visit, the Rector Mrs Randeria of CEU confirmed in the final session that the MSc Finance programme is covered by this agreement. Furthermore, it was stated that students can complete the programme even in the event of discontinuation. In the latter case, internal processes and approvals for a discontinuation event are defined.

No financial plan related directly to the degree programme was provided, only planning information at the department level that also includes other masters and MBA programmes. The historic tuition revenue and student numbers in the MSc Finance for the years 2019/2020, 2020/2021, and 2021/2022 are as follows:

- new enrolments 38, 40, 28
- tuition € 281.400, € 288.866, € 252.400
- average tuition per student € 7405, € 7222, € 9014

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

4.6 Assessment criteria § 17 (6): Infrastructure

Infrastructure

Quantitatively and qualitatively adequate facilities and equipment are provided for the degree programme at all sites at which teaching will be offered. In the case that external resources are required for the degree programme, their right of disposal has been secured and the key points thereof shall be described in the application for programme accreditation.

The study programme will accommodate 40-60 students. During the site visit at the CEU PU, the experts were invited to see classrooms, lecture halls, computer labs, study rooms, the library and a cafeteria. The campus opened in October 2019, occupying 24 606 m² across 7 floors. It offers 36 classrooms, with a seating capacity ranging from 6 to 75 with a total capacity of approximately 960 seats. There is also an Auditorium with 200 seats. The facilities are in excellent condition and quantitatively more than adequate. Lecture halls allow for interactive, multi-media supported teaching. Study rooms and computer labs are well equipped and can all be booked by any student online. Classroom are equipped with two interactive displays. Each floor of the campus building provides multiple copiers und kitchens for students to use. Within the library area, students have access to bookable collaboration rooms and a media centre. According to the interviews students are also provided with all software needed in the courses.

For staff, the campus provides 138 single and 205 shared offices, with a total seating capacity of 831 as well 15 meeting rooms.

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

4.7 Assessment criterion § 17 (7): Co-operations

Co-operation

Co-operation projects with other higher education institutions and, if applicable, partnerships with institutions outside the higher education area in Austria and abroad that match the degree programme's profile are provided for. The mobility of students and staff is being promoted.

CEU PU promotes the exchange with partner universities and business schools. As stated in the application, the Department holds bilateral exchange agreements for business education with several partner universities that students can visit for up to a semester. For the full-time version of the Master's programme, exchanges with partner universities that last a whole semester are not a good fit because the CEU Master's programme is designed for one year; however, for students in the part-time programme, it is possible. Students in the full-time programme may continue a semester abroad after completion of the master at CEU.

For the obligatory mandatory Capstone project, CEU PU offers its students access to a renowned partner network. The corporate partner network is underway in Austria.

According to the discussions with CEU students during the site visit, travel and accommodation costs can be subsidized. Furthermore, students have the opportunity to work with the CEU Innovations Lab Incubator and its start-ups.

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

5 Summary and final evaluation

(1) Development and quality assurance

The degree programme is one of the last programmes that CEU wants to transfer from Budapest to Vienna. The development of the programme was triggered by market needs and followed CEU's predefined procedures, i.e., internal submission and approval processes, followed by registration and accreditation procedures with external institutions. CEU closely cooperated with future employers, one-on-one meetings with industry, and the MSc in Finance Advisory Committee comprising industry representatives to ensure the applicability of the programme to industry needs.

The MSc of Finance Advisory Committee is a working group of senior executives offering professional guidance. Its inputs are highly valuable. Therefore, the expert group recommends to specify how the Committee is involved in the further development and quality assurance of the programme.

The programme's quality assurance process follows the University's general rules, i.e., continuous quality assessment and an annual review process. CEU emphasizes that student performance and feedback (through course evaluations and town hall meetings), as well as feedback from industry and the Advisory Committee in particular play an important role in quality assurance.

(2) Degree programme and degree programme management

The degree programme is oriented towards the profile and strategic objectives of CEU. The international university is research-intensive and offers degree programmes in the humanities, social sciences, public policy, law, management and emerging fields. It is an institution of advanced research and teaching, dedicated to socially and morally responsible intellectual inquiry. It is committed to promoting the values of open society and self-reflective critical thinking. The global classroom experience, global topics, international use cases, as well as specific courses such as the ethic course ensure the alignment of the programme with the university's profile and mission.

CEU defines clear learning outcomes for the programme and four possible specializations (investments and banking, financial management, innovation and fintech, data tools and analysis). Moreover, the teaching philosophy and methods support the development of personal and social skills such as critical thinking, peer-to-peer learning, teamwork, cultural awareness, and disciplined reasoning, for example. The name "Finance" is appropriate for the programme because it provides the relevant skills required by the finance industry.

The programme is sound from a methodological and technical perspective. The courses of the programme reflect the most recent scientific and didactic standards of the finance subject area. The programme comprises financial management, asset pricing, banking and financial institutions, trading and portfolio theory, corporate finance and risk management, data analysis, as well as the capstone project as core subjects that cover the most important subjects of finance. The content and the teaching methods are designed such that they not only ensure the active involvement of students in the learning process (by grading course attendance and participation as well as the requirement to regularly submit assignments). Content and teaching follow the principles of constructive alignment: content, teaching, learning, and examination methods (homework, in-class presentations, exams, and more involved applied projects as well as the Capstone project) are well coordinated and support the achievement of the learning outcomes. While the MSc Finance is not a research degree, the programme contents are up to the most recent standards of the discipline and include subject-specific research.

The workload of the programme is substantial and certainly a challenge for students. Nevertheless, it is well distributed across courses and terms. The courses are thought in a 6 week block format with two full afternoons of classes per week. This format allows for part-time studying, in which case the workload is halved and courses are held on only one afternoon per week. The ECTS credits are applied correctly and the achievement of the learning objectives is ensured.

CEU has defined general and programme-specific admission requirements that are made transparent to the students on the university's website. The combination of the acceptance of undergraduate four year degrees or graduate degrees, the requirement to hand in an application with motivation letter and reference letters, English and math tests, a personal interview, and the application evaluation and ranking through a panel ensure a fair selection of the applicants. To ensure the achievement of the qualification objectives, students with a less quantitative background have to take an additional 12 weeks math course before starting with the programme.

Formally and informally acquired competencies can be credited towards the programme with up to 16 ECTS credits. The corresponding rules and procedures are defined in the document "Student Rights, Rules, and Academic Regulations", which is available to the students.

(3) Research and development

CEU has a strong research focus. Evidenced by the CVs of the core faculty of the Department of Economics and Business, the research-related achievements stand out and range from prestigious grants, publications, to PhDs obtained from top international research universities. Department members regularly publish in the top academic journals in the field of Finance and Economics. The faculty members who are involved in the programme actively contribute to the research in the field of Finance.

(4) Staff

There is enough research and teaching staff located in Vienna to deliver the courses on site. 62% of the curriculum's 148 ECTS credits are taught by resident faculty that is working at least 50% of their working hours (at least 20 hours per week) in permanent or multi-year fixed-term employment at the CEU and the CEU Vienna Campus as their place of work. The CVs attached to the application documents show that the teaching and research staff have both the necessary subject-specific competencies and didactic skills to deliver the courses assigned to them. While some elective courses are staffed by part-time faculty that have less academic training than

CEU's core faculty, the CEU's otherwise careful selection of teaching staff and faculty suggests that these individuals also have the necessary skills and additionally bring some unique perspectives on the taught subjects.

The majority of the core subject courses are taught by permanent faculty members, i.e., by two professors corresponding to 2 FTE and two assistant professors corresponding to 2 FTE. The other core subject courses are delivered by a part-time resident lecturer and a recurrent visiting lecturer.

Adjunct teachers or new visiting faculty members are integrated adequately. They participate in orientation sessions, intensively discuss the syllabi of their course with the department, get technical support, and are supported by mentors who introduce them to CEU, teaching practices, organizational structures, departmental expectations etc.

The expected student-professor ratio lies between 6 (with 60 students) and 4 (with 40 students) and is significantly below Austria's average of 14 (figure from 2017).

In general, the standard division of the workload into 30-50% teaching (default teaching load is 24 ECTS credits), 30-50% research and 20-40% administration ensures an appropriate balance of teaching, research and administrative activities. The teaching load is moderate in terms of ECTS credits but still time-consuming because of the intensive support to students.

To support the programme in administrative tasks, CEU provides 6 FTE of administrative support on a departmental level. Those 6 FTE are partially shared with the Business Analytics programme. This workforce is sufficient to cover student related tasks, lecturer related tasks, schedule related tasks, marketing, stakeholder management etc. The degree programme also receives administrative support on an institutional level: Innovation Lab (start-ups support), ExEd Hub (facilitates access to high-quality professional education), admissions office (applications processing), student records office (course registrations, credits, transcripts of records, diplomas etc.), students centre (accommodation, health insurance and visa for students), career service office (career support), alumni relations office (alumni community).

(5) Funding

No financial plan related directly to the degree programme was provided, only planning information at the department level that also includes other masters and MBA. However, the historic tuition revenue and student numbers in the MSc Finance for the years 2019/2020, 2020/2021, 2021/2022 are provided. Moreover, a signed grant letter from Open Society Foundation is available that confirms a grant of 550 mEUR for the period Aug. 1, 2020 to July 31, 2032. In the personal meeting the CEU' Rector, Mrs Randeria, confirmed in the final session that the MSc Finance programme is covered by this agreement. The university guarantees that students enrolled in the programme will be able to graduate even in the event of its discontinuation.

(6) Infrastructure

CEU's facilities in Vienna are in excellent condition, quantitatively more than adequate, and designed for multimedia teaching. Students are provided with the required software.

(7) Co-operation

CEU promotes the exchange with partner universities and business schools. The department holds bilateral exchange agreements for business education with several partner universities. For the full-time version of the master's programme, exchanges with partner universities that last a whole a semester are not a good fit because the CEU Master's programme is designed for

one year; however, for students in the part-time programme it is possible. Moreover, for the obligatory Capstone project, CEU offers its students access to a renowned partner network.

Taking into account all submitted accreditation documents and the informative and cooperative discussions with the CEU on site, the experts recommend the accreditation of the degree programme.

The experts **recommend** to the Board of AQ Austria the accreditation of the master degree programme in "Finance" of the Central European University Private University.

Pro Memoria - Recommendations:

The MSc of Finance Advisory Committee is a working group of senior executives offering professional guidance. Its inputs are highly valuable. Therefore, the expert group recommends to specify how the Committee is involved in the further development and quality assurance of the programme.

6 Documents reviewed

- Applications of the Central European Private University from 06.10.2022 in the version of 14.02.2022 for the accreditation of the master degree programmes "Business Analytics" and "Finance", to be offered in Vienna
- Submission of further information from 13.04.2022 following the site visit:
 - missing CVs and employment contracts of permanent faculty members
 - the "CEU 2025" strategic plan
 - additional details on the teaching load of permanent and visiting faculty
 - additional details on the tuition revenue
 - summary of classroom usage
 - details on student placement