

Report on the Outcome of the Accreditation Procedure of the Joint Master's Programme "Data Engineering and Artificial Intelligence" Offered by Université Libre de Bruxelles (ULB), Belgium, in Cooperation with Universitat Politècnica de Catalunya (UPC), Spain, Technische Universität Wien (TUW), Austria, Università degli Studi di Padova (UniPd), Italy, and Université Claude Bernard Lyon 1 (UCBL), France

Accreditation Decision

1 Subject of the Application

The Joint Master's Programme "Data Engineering and Artificial Intelligence" (DEAI) underwent an external quality assurance procedure coordinated by the Agency for Quality Assurance and Accreditation Austria (AQ Austria). Pursuant to the *European Approach for Quality Assurance of Joint Programmes*, Université libre de Bruxelles (ULB) submitted an application for external evaluation on behalf of all partner universities (herein after referred to as "the Consortium").

2 Procedural Steps

The accreditation procedure comprised the following steps:

Procedural steps	Date
Receipt of the self-evaluation report (SER)	01 March 2026
Request for revision of the SER	16 March 2026
Online meeting with the Consortium on the revision of the SER	23 March 2026
Receipt of the revised SER	23 March 2026
Confirmation of the completeness and formal correctness of the application	24 March 2026
Appointment of the review panel and decision on the procedure by the Board of AQ Austria	19 February 2026 13 March 2026
Notification of the Consortium of the nominated review panel	17 March 2026
Pre-visit meetings of the review panel	09 April 2026 20 April 2026
Receipt of additional documentation prior to the virtual site visit	17 April 2026
Virtual site visit	21 April 2026

Post-visit meeting of the review panel	24 April 2026
Receipt of additional documentation after the virtual site visit	22 April 2026 06 May 2026
Completion of the review report	03 July 2026
Submission of the review report to the Consortium for a statement	03 July 2026
Submission of the statement of costs to the Consortium	10 July 2026
Confirmation of receipt of the statement of costs	10 July 2026

3 Accreditation Decision

At its 100th meeting, held on 24 September 2026, the Board of AQ Austria considered the accreditation of the Joint Master's Programme "Data Engineering and Artificial Intelligence" (DEAI) on the basis of the review report. It decided to grant accreditation to DEAI, without conditions, for a period of six years. The programme is jointly offered by the following partner universities:

- Université Libre de Bruxelles (ULB), Belgium
- Universitat Politècnica de Catalunya (UPC), Spain
- Technische Universität Wien (TUW), Austria
- Università degli Studi di Padova (UniPd), Italy
- Université Claude Bernard Lyon 1 (UCBL), France

The Joint Master's Programme leads to the award of a multiple degree. Students following the mobility paths involving ULB, UPC, and TUW or UCBL receive a certificate listing the degrees awarded by the respective institutions. Students following the mobility path involving ULB, UPC, and UniPd receive multiple certificates and an additional certificate listing those degrees. The following degrees are awarded:

- ULB: Master of Science in Computer Science and Engineering
- UPC: Master Erasmus Mundus in Data Engineering and Artificial Intelligence
- TUW: Diplom Ingenieur/Ingenieurin
- UniPd: Laurea Magistrale in Data Science
- UCBL: Master Data and Intelligence for Smart Systems

The accreditation decision is valid from 24 September 2026 until 24 September 2032.

4 Annex

- Review report by AQ Austria, 03 July 2026

Expert report on the accreditation procedure for the Joint Master's Programme 'Data Engineering and Artificial Intelligence' by the Université Libre de Bruxelles, conducted in Brussels, Barcelona, Vienna, Padova and Lyon

pursuant to the European Approach for Quality Assurance of Joint Programmes

Vienna, 02/07/2026

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Overview of the accreditation procedure

Information on the applicant institution	
Applicant institution (Lead partner on behalf of the DEAI Consortium)	Université Libre de Bruxelles
Sites of the higher education institution	Solbosch Campus (Brussels/Ixelles), Plaine Campus (Brussels/Ixelles), Erasme Campus (Anderlecht, Brussels), ULB Charleroi (Charleroi)
Legal status	Public autonomous university (French-speaking higher education institution funded by the Fédération Wallonie-Bruxelles)
Initial institutional accreditation	1834
Number of students	+/- 39.000 students
Accredited study programmes	290 accredited study programmes (around 40 Bachelor's programmes, 250 Master's programmes, including specialised Master's programmes)
Consortium partners/sites of study	• Universitat Politècnica de Catalunya (UPC), Barcelona, Spain • Technische Universität Wien (TUW), Vienna, Austria • Università degli Studi di Padova (UniPd), Padova, Italy • Université Claude Bernard Lyon 1 (UCBL), Lyon, France

Information on the accreditation application	
Programme title	Data Engineering and Artificial Intelligence (DEAI)
Type of study programme	Master's Programme
ECTS credit points	120
Standard duration of studies	4 semesters
Planned number of students per academic year	35
Academic degree	Multiple Degree

	• Master of Science in Computer Science and Engineering (ULB) • Master Erasmus Mundus in Data Engineering and Artificial Intelligence (UPC) • Diplom-Ingenieur/Ingenieurin (TUW) • Laurea Magistrale in Data Science (UniPd) • Master Data and Intelligence for Smart Systems (UCBL)
Organizational form	Full-time
Language	English
Sites of the study programme	Brussels, Barcelona, Vienna, Padova, Lyon
Tuition fee	EU Students: € 4,500/academic year Non-EU Students: € 9,000/academic year

The applicant institution submitted the accreditation application on 01/03/2026.

According to the decision of AQ Austria's board on 19/02/2026 and 13/03/2026, the following experts were nominated for this procedure:

Name	Function and Institution	Area of competence
Prof. Dr. Giuseppe Di Fatta	Full Professor at the Free University of Bozen-Bolzano	Scientific qualification in the field of Artificial Intelligence and chair
Univ.-Prof. DI Dr. Alexander Felfernig	Full professor at the Graz University of Technology	Scientific qualification in the field of Artificial Intelligence
Thomas Quandalle	Head of Data Engineering Projects, National Audiovisual Institute, France	Professional qualification in the field of Data Engineering
Nienke Wessel, BSc	Master student in Computer Science, Radboud University Nijmegen, Netherlands	Experience as a student in the field of Data Science

On 21/04/2026 an online site visit took place.

Preliminary remarks

This report provides the evaluation of the accreditation application for the Erasmus Mundus Joint Master Degree Programme 'Data Engineering and Artificial Intelligence' (DEAI).

The review found the accreditation procedure to be well prepared and conducted in a professional and transparent manner. The self-evaluation report provided a comprehensive basis for the assessment. The online site visit took place on 21st April 2026. During the visit, the review panel engaged in open and constructive discussions with representatives of the Consortium, academic staff, and students and alumni. Additional information requested by the panel after the online site visit was provided promptly, facilitating the completion of the evaluation.

The review panel noted the strong continuity and accumulated experience of the Consortium in delivering Erasmus Mundus joint programmes in this field. The proposed DEAI programme is the latest stage in the evolution of a series of Erasmus Mundus programmes that have been offered for approximately 15 years. It builds on the experience gained through the Master's programmes 'Information Technologies for Business Intelligence' (IT4BI) and 'Big Data Management and Analytics' (BDMA), while adapting the curriculum to developments in Data Engineering and Artificial Intelligence. Over this period, the Consortium has evolved, with some partner institutions joining and others leaving the partnership in response to changing disciplinary priorities and emerging areas of expertise.

Assessment and evaluation pursuant to Standards for Quality Assurance of Joint Programmes in the EHEA

1. Eligibility

1.1 Status

The institutions that offer a joint programme should¹ be recognised as higher education institutions by the relevant authorities of their countries. Their respective national legal frameworks should enable them to participate in the joint programme and, if applicable, to award a joint degree. The institutions awarding the degree(s) should ensure that the degree(s) belong to the higher education degree systems of the countries in which they are based.

¹ The Standards use of the common English usage of "should" which has the connotation of prescription and compliance.

According to the self-evaluation report (SER) the DEAI programme is jointly delivered by the following five partner institutions:

- Université libre de Bruxelles (ULB)
- Universitat Politècnica de Catalunya (UPC)
- Technische Universität Wien (TUW)
- University degli Studi di Padova (UniPd)
- Université Claude Bernard Lyon 1 (UCBL)

They have provided the proof that they are officially recognised (and registered) as Higher Education Institutions (HEIs) in their countries and are therefore entitled to participate in the DEIA Joint Master programme.

All partner institutions operate within their respective national higher education and quality assurance frameworks and adhere to the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

The relevant external quality assurance agencies are ARES for ULB, AQU Catalunya for UPC, ANVUR for UniPd and Hcéres for UCBL. With regard to study programmes, TUW is not required to undergo external quality assurance procedures. Public universities in Austria have the right to accredit their own programmes.

The five main partners are completed by a network of associated partners that consists of academic partners, research centers and public and industrial partners.

During the online site visit, the Consortium confirmed that all partner institutions have substantial experience in the delivery of Erasmus Mundus Joint Master programmes. Based on the documentation provided and the information obtained during the online site visit, the review panel concludes that the eligibility requirements for participation in the DEAI programme are fulfilled.

According to the Consortium Agreement, the following degrees will be awarded:

- ULB: Master of Science in Computer Science and Engineering;
- UPC: Master Erasmus Mundus in Data Engineering and Artificial Intelligence;
- TUW: Diplom Ingenieur/Ingenieurin;
- UniPd: Laurea Magistrale in Data Science;
- UCBL: Master Data and Intelligence for Smart Systems.

Therefore, this Joint Master programme leads to the award of a multiple degree, regardless of the chosen mobility path. The Consortium Agreement further specifies that students following the mobility paths involving ULB, UPC, and TUW or UCBL will receive a joint diploma with multiple degrees awarded by the respective institutions. Students following the mobility path involving ULB, UPC, and UniPd will receive multiple diplomas. As stated in the Consortium Agreement, upon completion of the accreditation process the Consortium will start the process for obtaining a joint degree for the DEAI programme. The Consortium aims for the future to be eligible to be awarded with the European Degree Label.

The review panel examined the documentation provided in the SER together with the information gathered during the online site visit and found that all partner institutions are officially recognised higher education institutions entitled to participate in the DEAI Joint Master programme. The review panel further concludes that the applicable legal and institutional requirements for awarding the proposed degrees are fulfilled.

Assessment of the review panel: The standard is **met**.

1.2 Joint design and delivery

The joint programme should be offered jointly, involving all cooperating institutions in the design and delivery of the programme.

According to the information provided in the SER and obtained during the online site visit, the proposed joint programme was jointly developed and will be delivered by the five main partner institutions.

Industrial partners contribute to the definition of practical course exercises and Master's Thesis topics. Associated partners will engage and contribute to selected teaching and learning activities. International instructors may be invited to provide expertise in areas not covered by the five main partner institutions. The DEAI programme is designed to address the growing demand for professionals capable of developing and operating large-scale data-driven Artificial Intelligence systems.

The joint programme has a jointly organised selection process and mandatory joint academic events, notably the Summer School, the Joint Master's Thesis defences, and the graduation ceremony, which bring together students and academic staff from all partner institutions and further reinforce the integrated nature of the DEAI programme.

All cooperating institutions are involved in the joint design, delivery, evaluation and further development of the DEAI programme.

The governance and division of tasks are well structured where all partner institutions are represented (with one person with voting rights per partner) in the Executive Board (EB) (with meetings 3 times a year). Furthermore, there is a partner-wise responsibility for specific tasks, i.e., each partner institution is head of one of the committees. At the same time, some aspects should be more synchronised and not delegated to individual universities (e.g., 'AI'-related policies). From the review panels' point of view, the Consortium could develop more common approaches in such areas. In addition, the review panel found that there are some content overlaps between courses and therefore recommends the harmonisation of course content across the partner institutions.

The review panel also noted that some operational aspects of the DEAI programme, such as policies governing the use of Generative AI tools, continue to rely primarily on institutional regulations rather than consortium-wide arrangements. While this reflects the autonomy of the partner institutions, the review panel considers that a more harmonised Consortium level approach would contribute to a more consistent student experience.

Based on the documentation provided and the information obtained during the online site visit, the review panel concludes that the requirements regarding the joint design and delivery of the study programme are fulfilled.

Assessment of the review panel: The standard is **met**.

Recommendation

The review panel recommends that the Consortium continue to strengthen the joint development, coordination, and harmonisation of course content across the partner institutions and further enhance the consistency of the student experience across the different mobility paths (see also Standard 3.1).

1.3 Cooperation Agreement

The terms and conditions of the joint programme should be laid down in a cooperation agreement. The agreement should in particular cover the following issues:

- Denomination of the degree(s) awarded in the programme
- Coordination and responsibilities of the partners involved regarding management and financial organisation (including funding, sharing of costs and income etc.)
- Admission and selection procedures for students
- Mobility of students and teachers
- Examination regulations, student assessment methods, recognition of credits and degree awarding procedures in the consortium.

The Consortium Agreement is provided together with the SER. It defines the legal, organisational, academic, administrative, and financial framework of the DEAI programme. In particular, it regulates governance structures, partner responsibilities, degree-awarding arrangements, admission and selection procedures, mobility requirements, quality assurance mechanisms, financial management, and procedures related to student assessment and progression.

Degree-awarding procedures are described in the Consortium Agreement and summarised in the SER. In addition, they are also presented on the DEAI programme website (<https://deai.ulb.be/home/master-programme/degree-accreditation-and-grading/>) and are consistent with the proposed, as it is the case for now, multiple degree-awarding arrangements. (see 1.1 Status)

Coordination and responsibilities are organised and distributed across a number of committees.

The Executive Board (EB) is responsible for the overall organisation of the study programme. It cooperates closely with the External Evaluation Board (EEB) and the Advisory Board (AB). One level below the Executive Board are the Local Coordination Offices (LCOs) of the main partners, which cooperate with the Sustainability Committee (SC) at ULB, the Student and Alumni Committee (SAC) at UPC, the Promotion and Outreach Committee (POC) at TUW, the Academic Cooperation Committee (ACC) at UniPd, and the Quality Management Committee (QMC) at UCBL.

During the online site visit, the review panel requested additional documentation regarding the overall financing of the study programme, which was promptly provided after the online site visit. The proposed financial plan contained in the Consortium Agreement appears reasonable. The review panel requested a detailed breakdown of costs in order to assess their adequacy. The additional information provided after the online site visit was satisfactory and offered a transparent overview of the DEAI programme's financial structure. The Consortium Agreement also establishes clear rules for the allocation and distribution of Erasmus Mundus funding among the partner institutions, including provisions related to programme management, student support, mobility activities, teaching contributions, and quality assurance. The review panel found these financial arrangements to be clearly documented and appropriate for the delivery of the DEAI programme.

The role of the individual committees was further clarified during the online site visit. From the SER, it becomes clear that

- The EB is responsible for the overall academic, financial, and administrative management of the study programme. This also includes deliberation and decisions regarding student progression and successful completion of the DEAI programme. It

is responsible for determining the composition of all other committees. Decisions are intended to be taken, whenever possible, by consensus, which appears reasonable given the relatively small number of main partner institutions. All partners agree to carry out the procedures according to binding rules and criteria in line with the principles of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). All partners agree to carry out the procedures in accordance with the binding rules and criteria, and to adhere to the principles set out in Part I of the ESG.

- The LCOs are responsible for the local implementation and management of the study programme, including local quality assurance, financial management, and promotion of the programme.
- The SC is responsible for ensuring the long-term strategy and sustainability of the programme beyond the funding period, including the evaluation of its social impact.
- The SAC meets physically once a year and is responsible for the selection of scholarship and non-scholarship students. In addition, it meets electronically once a year for the selection of self-funded students.
- The POC is responsible for the worldwide promotion and visibility of the study programme. Its activities include website management, media presence, and the development and dissemination of promotional material. The committee meets physically once a year.
- The ACC is responsible for establishing and maintaining cooperation and communication among all programme partners, including main partners, associated partners, and industry partners.
- The QMC is responsible for monitoring and assessing the quality of the DEAI programme and for proposing improvement measures to the EB.
- The EEB is responsible for the independent evaluation of the DEAI programme. Its activities include reviewing the curriculum, promotion activities, student selection procedures, and sustainability measures.
- The AB supports the strategic development of the programme and provides guidance to ensure that the curriculum and programme structure remain aligned with future developments and needs in the field.

Admission and selection procedures are documented in satisfactory detail. Student selection follows a two-phase process. In the first phase, eligibility criteria are assessed, including the possession of a relevant bachelor's degree and English language proficiency at level B2 or above. In the second phase, additional criteria such as academic performance, motivation letters, reference letters, and professional experience are evaluated.

The Consortium Agreement establishes the general framework for student admission and selection, including the responsibilities of the consortium bodies involved in the joint selection process. Detailed admission requirements and selection procedures are described in the SER and the Admission Manual.

The review panel found that student mobility is organised in a transparent and structured manner. The DEAI programme follows a sequential mobility scheme in which students move between partner institutions during the DEAI programme. The process for selecting a specialisation track appears fair and actively involves students by allowing them to express their preferences. The SAC is responsible for the final allocation decisions.

The Consortium provided additional information after the online site visit describing the planned arrangements for teacher mobility. Mobility support is also available for academic staff. In particular, external lecturers may be invited to contribute to teaching activities in areas not fully covered by the main partner institutions. As teacher mobility is not

addressed in the current Consortium Agreement, the review panel recommends that this aspect is included in a future version of the Consortium Agreement.

Local regulations apply with regard to examinations and student assessment. The Consortium uses the grading scales of the respective partner institutions, with subsequent conversion to ECTS grades based on the agreed conversion tables included in the Consortium Agreement. The regulations also define resit procedures: failed examinations may be retaken after two weeks, while failed Master's Thesis defences may be repeated between two and six months after the initial defence. Continued failure may result in a student being required to leave the DEAI programme without being awarded a degree. Each accepted student signs a Student Agreement that includes, among other elements, the Study and Examination Regulations. These regulations define the requirements for the successful acquisition of ECTS credits, provide information on the grading system, and specify the consequences of failing courses or the Master's Thesis.

Based on the documentation provided, the review panel concludes that the Consortium Agreement provides an adequate framework for the joint delivery, governance, financing, quality assurance, and management of the DEAI programme.

Assessment of the review panel: The standard is **met**.

Recommendation

The review panel recommends that the Consortium seek opportunities to include arrangements for teacher mobility in a future version of the Consortium Agreement.

Commendation

The review panel commends the meaningful design of the governance, management and decision-making structures, which provides an adequate framework for the delivery of the joint programme.

2. Learning Outcomes

2.1 Level [ESG 1.2]

The intended learning outcomes should align with the corresponding level in the Framework for Qualifications in the European Higher Education Area (FQ-EHEA), as well as the applicable national qualifications framework(s).

The intended learning outcomes of the DEAI programme are described in the SER. As stated in an intended learning outcome, graduates of the programme will, in case of successful completion, demonstrate comprehensive theoretical and practical understanding in Data Engineering and Artificial Intelligence to analyse large and complex datasets. Notably, the Data Engineering and Artificial Intelligence seminars will provide students with the latest updates in a fast-changing field. The Consortium Agreement indicates that students must hold a bachelor degree with a Computer Science major. Therefore, the review panel finds that the DEAI programme grants specialised knowledge founded upon first-cycle knowledge.

According to the SER, DEAI graduates are awarded with skills to design, implement, deploy and evaluate robust data-driven AI solutions in real-world contexts, implement DataOps and MLOps, ensure robustness and reproducibility, and demonstrate proficiency in distributed architectures, scalable analytics and high-performance data processing at the completion of the master. As presented in the course programme, some courses

include a project evaluation or lab hours. The optional Summer of Code internship in the summer between the first and the second year and the mandatory Master's Thesis, as presented in the SER and discussed during the online site visit, enforce the students' skills in applying their knowledge to solve problems. The review panel therefore considers that graduates can apply their knowledge, understanding and problem-solving abilities in different environments.

As precised in the SER, the DEAI programme aims to teach students to demonstrate effective communication and teamwork, communicating technical concepts clearly and collaborating effectively in multicultural and multidisciplinary teams. This intended learning outcome is integrated in the programme and achieved through the poster presentation during the Summer School at the end of the first year and during the defense of the Master's Thesis. Thus, the review panel finds that graduates are expected to be able to communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously.

The DEAI programme, according to the SER, provides students with skills to identify and address ethical, societal and legal issues in the development and deployment of data-driven AI systems complying with EU regulatory frameworks and best practices concerning data governance, responsible AI, and sustainability principles. In the SER it is also stated that students are awarded with technical design and evaluation skills of complex data-driven AI systems. The review panel determines that students can integrate knowledge and handle complexity to formulate judgements, both on technical, social and ethical issues of data-driven AI systems.

Some alumni of the predecessor programme have gone on in doctoral studies. Another alumnus mentioned during the online site visit his autonomous learning about agentic AI after the programme. The DEAI programme, according to the SER, intends to provide students with the skills to conduct independent, scientific research and to contribute to innovation in Data Engineering and Artificial Intelligence, in particular by pursuing doctoral studies. During the online site visit, the ambition of increasing the number of graduates proceeding to doctoral studies was discussed with the EB. Given the BDMA alumni feedback and the DEAI programme's ambitions, the review panel considers that the DEAI programme ensures that the students acquire the learning skills that allow them to continue to study, in a manner that is largely self-directed or autonomous.

The review panel finds that the key aspects of the DEAI programme align with the following areas of the FQ-EHEA second cycle:

- Knowledge and understanding: Students will acquire state-of-the-art theoretical and practical knowledge regarding Data Engineering
- and Artificial Intelligence for analysis of large, complex datasets
- Applying knowledge and understanding: Students will learn to apply their knowledge through the DEAI programme, notably with the Master's Thesis and the courses projects.
- Making judgements: Students will be able formulate judgements, both in the design and evaluation (technical, ethical and legal) of complex data-driven AI systems
- Communication skills: Due to the multicultural setting of the DEAI programme and the communication and teamwork learning outcome, students will be able to communicate their conclusions, knowledge and rationale both to experts and non-experts.
- Learning skills: Students will acquire autonomous learning skills during the DEAI programme, either to go on in doctoral studies to apply in their professional experiences.

In summary, from the review panel's point of view, the DEAI programme is an ambitious, forward-looking programme regarding Data Engineering and Artificial Intelligence applied to large and complex datasets analysis. It empowers students and enables them to both acquire knowledge, skills and autonomy for their careers in academia or industry. The FQ-EHEA second cycle is compatible with the EQF level 7 and aligns with the national qualification frameworks.

Assessment of the review panel: The standard is **met**.

2.2 Disciplinary field

The intended learning outcomes should comprise knowledge, skills, and competencies in the respective disciplinary field(s).

In its SER, the Consortium reports that the DEAI programme is a specialised Master's programme situated within the field of Computer Science, with a focus on Data Engineering and Artificial Intelligence. The Consortium indicates that the disciplinary scope of the DEAI programme is reflected in its alignment with the ISCED field 061 (Information and Communication Technologies), and more specifically with advanced studies in Computer Science and data-intensive systems.

The Consortium states in the SER that the intended learning outcomes comprise knowledge, skills and competences in Data Engineering and Artificial Intelligence. Specifically, the intended learning outcomes of the DEAI programme described in the SER mention knowledge and skills in Data Engineering (including Data Management, storage, processing and analytics at large scale), Artificial Intelligence (including Machine Learning, Deep Learning, Symbolic AI, and Large Language Models) and complementary perspectives in data governance, legal and ethical issues of data systems. As discussed during the online site visit, the Consortium reports that Data Engineering is overlooked, especially in Europe. The programme's ambition for students is to master both Data Engineering and Artificial Intelligence knowledge and skills to ensure the deployment of data-driven AI systems and scale up complex systems.

As discussed during the online site visit, the Consortium reviews every two editions its curriculum and the intended learning outcomes. The review is based on the analysis by the AB. The AB, as stated in the SER, is composed of industrial and public associated partners as well as DEAI alumni. At the time of the online site visit, the AB was not yet set up and the relation with the industrial partners wasn't formalised. It is the opinion of the review panel that this AB will ensure the fitness of the intended learning outcomes with the programme's vision.

It is the review panel's opinion that the DEAI programme shows strong dedication to offer Data Engineering knowledge, skills and competencies. The review panel finds that some aspects of the Artificial Intelligence field, such as Computer Vision, are not mentioned in the intended learning outcomes. However, the review panel considers that the DEAI programme does offer knowledge, skills and competencies in specialised aspects of the Artificial Intelligence field.

Assessment of the review panel: The standard is **met**.

Recommendations

The programme title 'Data Engineering and Artificial Intelligence' may give the impression that the whole Artificial Intelligence field is tackled in the DEAI programme. The

review panel suggests that the Consortium consider clarifying the programme's scope regarding the specific aspects of Artificial Intelligence it addresses.

Additionally, the review panel suggests formalising the relation between the partners in the AB and the Consortium.

2.3 Achievement [ESG 1.2]

The programme should be able to demonstrate that the intended learning outcomes are achieved.

According to the SER, the Consortium addresses a clear labour market demand for professionals combining Data Engineering and Artificial Intelligence expertise. Graduates of the DEAI programme will demonstrate comprehensive theoretical and practical understanding in Data Engineering and Artificial Intelligence to analyse large and complex datasets. The intended learning outcomes are:

- advanced knowledge and understanding in Data Engineering
- and Artificial Intelligence;
- advanced cognitive and technical skills in design, implementation, deployment and evaluation of data-driven AI systems;
- research and innovation competence in Data Engineering and Artificial Intelligence;
- ethical, legal and societal responsibility regarding data-driven AI systems in the EU regulatory framework;
- transversal and intercultural skills.

The Consortium states in the SER that the intended learning outcomes are considered achieved through the successful completion of course assessments, project work, and the Master's Thesis, which provides evidence of students' capacity to conduct independent research, apply appropriate methodologies, and address complex problems in Data Engineering and Artificial Intelligence.

It is mentioned in the Consortium Agreement that the EB analyses the students' examination results to determine who graduates from the DEAI programme. The review panel finds that the system of assessment is adequate, with further explanations in standard 5.2. The awarded degrees, specified in standard 1.1, demonstrate the achievement of the intended learning outcomes. The review panel examined, as further explained in standard 3.1, the curriculum structure, course descriptions, and evidence collected during the online site visit and found the curriculum to be coherent, progressive, and fit for purpose.

The AB, as described in the SER, ensures the alignment of the intended learning outcomes with the industry needs. Alumni from the predecessor programme BDMA also shared that the teaching staff is dedicated and monitors the students throughout the programme.

The Consortium, as stated in the SER, also monitors the achievement of learning outcomes through indicators related to student success and graduate trajectories. As stated in the SER and in the discussion with alumni of the predecessor programme BDMA, several students have obtained or are pursuing a PhD and several others have integrated industry positions in the Data Engineering field. Hence the predecessor programme BDMA have shown strong outcomes in terms of employability, both in industrial and academic fields.

The students' mobility pathway enables them to immerse themselves in the cultures of at least three countries, facilitated by their integration with local students. The review panel considers that this immersion contributes to the transversal and intercultural skills intended learning outcome.

The review panel considers that both the evidence from the predecessor programme BDMA and the design of the DEAI programme demonstrate that the intended learning outcomes are likely to be achieved even though the DEAI has not yet started. Furthermore, the first semester of the DEAI programme aims at harmonising the students' knowledge in the respective fields which also contributes to the achievement of the learning outcomes.

Assessment of the review panel: The standard is **met**.

Commendation

As discussed during the online site visit, the first semester of the DEAI programme aims to harmonise the students' level with a foundational curriculum. Considering the heterogeneous backgrounds of students, the review panel commends the Consortium for designing a semester aiming to harmonise the students' knowledge and skills in Data Engineering and Artificial Intelligence.

2.4 Regulated Professions

If relevant for the specific joint programme, the minimum agreed training conditions specified in the European Union Directive 2005/36/EC, or relevant common trainings frameworks established under the Directive, should be taken into account.

Not relevant

3. Study Programme [ESG 1.2]

3.1 Curriculum

The structure and content of the curriculum should be fit to enable the students to achieve the intended learning outcomes.

According to the SER, the DEAI programme is a two-year (120 ECTS credits) joint master's programme delivered by five higher education institutions. The curriculum combines a common foundational year with specialised tracks and a research-oriented Master's Thesis.

During the online site visit, the Consortium explained that the DEAI programme builds on more than fifteen years of experience with previous Erasmus Mundus programmes in Business Intelligence and Big Data, progressively evolving towards its current focus on AI and data-driven systems. The first year, delivered jointly by ULB and UPC, provides foundations in Data Engineering, Data Management, Machine Learning, and AI, while also aiming to level students' heterogeneous backgrounds. The second year offers three specialisation tracks aligned with the expertise of the partner institutions, including Knowledge Graphs, Symbolic AI, Natural Language Processing (NLP), Process Mining, Heterogeneous Data Systems, and large-scale infrastructures. During the online site visit, the Consortium repeatedly emphasised that the DEAI programme's distinctive feature is the integration of „Data Engineering for AI“, namely the preparation of graduates capable of operationalising AI systems on large-scale and heterogeneous data infrastructures.

The review panel notes that the DEAI programme offers three distinct mobility and specialisation paths in the second year, allowing students to deepen their expertise in different areas of Data Engineering and Artificial Intelligence. The mobility structure is coherent and reflects the complementary expertise of the partner institutions. At the same time, the review panel observed that topics related to the ethical, legal, and societal dimensions of Artificial Intelligence are addressed to varying degrees across the different specialisation paths. Given the increasing importance of frameworks such as the General Data Protection Regulation (GDPR), the AI Act, and related issues of responsible and trustworthy AI, the review panel recommends ensuring that all students, irrespective of their chosen mobility path, acquire a common foundation in these areas. This would further strengthen the coherence of the DEAI programme and ensure that all graduates achieve the intended learning outcomes related to ethical, legal, and societal responsibility.

The curriculum demonstrates a clear alignment between the intended learning outcomes, the programme structure, and the teaching and learning activities. The progressive organisation from foundational courses to advanced specialisation and independent research appropriately supports the achievement of second-cycle learning outcomes.

The review panel particularly appreciated the programme's clear positioning at the intersection of Data Engineering and Artificial Intelligence. The Consortium convincingly demonstrated that the DEAI programme does not seek to replicate a traditional AI Master's programme but instead addresses the growing demand for professionals capable of deploying scalable and operational AI systems in real-world environments. The review panel also positively noted the Consortium's extensive experience with previous Erasmus Mundus programmes and its ability to continuously adapt the curriculum to developments in the field.

Teaching and learning methods are appropriately aligned with the programme objectives. Project-based learning, integrated projects, research-oriented seminars, poster sessions, and thesis work provide students with substantial opportunities to apply theoretical knowledge in practical and research contexts. The review panel particularly appreciated the integration of research methodology and scientific communication activities throughout the programme.

The review panel also learned that project-based learning constitutes a central pedagogical component of the DEAI programme. In particular, the Summer School, the jointly organised Summer of Code, integrated semester projects, and the jointly supervised Master's Thesis are intended to support research skills, teamwork, and the practical application of knowledge.

The Consortium explained that curriculum development is carried out jointly by the partners and is periodically reviewed through discussions involving academic and industrial stakeholders. The review panel noted that the Consortium is aware of the rapidly evolving developments related to Generative AI and Large Language Models and is considering future curriculum adaptations in this area.

Moreover, the review panel considers that some aspects of curriculum coordination and harmonisation across partners could be further formalised. During the online site visit, both staff and students acknowledged that some overlap between courses in the planned DEAI programme may occur and that coordination mainly relies on regular discussions and informal exchanges. The review panel also encourages the Consortium to continue reviewing the curriculum in light of recent developments in Generative AI and Large Language Models.

The review panel examined the curriculum structure, course descriptions, and evidence collected during the online site visit and found the curriculum to be coherent, progressive, and fit for purpose.

Assessment of the review panel: the standard is **met**.

Recommendations

The review panel recommends that the Consortium continue to strengthen formal coordination mechanisms among lecturers in order to further minimise content overlap and support the continuous development of the curriculum, particularly with regard to emerging topics such as Generative AI and Large Language Models.

The review panel also recommends ensuring that all students, irrespective of their chosen mobility path, acquire a common foundation in the ethical, legal, and societal aspects of AI, including the General Data Protection Regulation (GDPR), the AI Act, and principles of responsible and trustworthy AI.

Commendation

The review panel congratulates the Consortium on developing a coherent and innovative curriculum that successfully integrates Data Engineering and Artificial Intelligence while building upon a long-standing and highly relevant Erasmus Mundus experience.

3.2 Credits

The European Credit Transfer System (ECTS) should be applied properly and the distribution of credits should be clear.

The DEAI programme comprises 120 ECTS credits, distributed evenly across four semesters of 30 ECTS credits each. All partner institutions apply the ECTS framework and allocate credits according to the expected student workload, including lectures, laboratory work, project work, independent study, and assessments.

The Consortium confirmed during the online site visit that one ECTS credit corresponds to approximately 25–30 hours of student workload across the Consortium, with only minor institutional differences.

The review panel found that the ECTS is properly and consistently applied throughout the Consortium. The distribution of credits across semesters and among foundational courses, specialised courses, projects, and thesis work is transparent and appropriate for a second-cycle joint master's programme.

Assessment of the review panel: The standard is **met**.

Commendations

The review panel positively noted the Consortium's long-standing experience with Erasmus Mundus mobility structures and ECTS implementation. Minor national differences in workload calculations do not appear to create significant inconsistencies for students. The review panel found the system transparent, consistently applied by the Consortium.

3.3 Workload

A joint bachelor programme will typically amount to a total student workload of 180-240 ECTS-credits; a joint master programme will typically amount to 90-120 ECTS-credits and should not be less than 60 ECTS-credits at second cycle level (credit ranges according to the FQ-EHEA); for joint doctorates there is no credit range specified. The workload and the average time to complete the programme should be monitored.

The DEAI programme corresponds to a total workload of 120 ECTS credits over two academic years, fully aligned with the second-cycle requirements of the QF-EHEA. Each semester corresponds to 30 ECTS credits, ensuring an evenly distributed workload throughout the programme.

The SER indicates that the workload includes lectures, laboratory sessions, project work, independent study, and assessment activities. The Consortium stated that workload is continuously monitored through course evaluations, semester evaluations, student feedback, and academic coordination meetings.

During the online site visit, the Consortium acknowledged that the DEAI programme is demanding due to its specialised nature and the heterogeneous backgrounds of students but explained that the first year is specifically designed to harmonise prior knowledge and facilitate student progression. The Consortium also reported that its previous Erasmus Mundus experience has enabled it to develop effective student selection and support mechanisms to help students successfully complete the programme.

The review panel considers that the overall workload of the DEAI programme is appropriate for a second-cycle joint master's degree and fully consistent with the expected workload of a 120 ECTS credits Erasmus Mundus Master's programme. From the perspective of the review panel, the workload is balanced across semesters and appropriately distributed among theoretical instruction, practical activities, project work, and research components.

Assessment of the review panel: The standard is **met**.

Commendations

The review panel appreciates that the Consortium actively monitors workload through several quality assurance mechanisms and is prepared to make adjustments if discrepancies arise between expected and actual workload.

The review panel considers the planned high level of student support to be an important factor contributing to student success and to the overall quality and coherence of the programme.

The review panel also positively notes that the Consortium is aware of the demanding nature of the DEAI programme and has implemented mechanisms to support students academically and administratively throughout their mobility pathway.

4. Admission and Recognition [ESG 1.4]

4.1. Admission

The admission requirements and selection procedures should be appropriate in light of the programme's level and discipline.

The information presented below is based on the SER and the discussions held during the online site visit. The admission process appears to be a transparent and jointly governed procedure based on predefined criteria designed to ensure fairness and academic excellence.

Students from all countries may apply to the DEAI programme. Applicants must hold a bachelor's degree (or equivalent qualification corresponding to at least 180 ECTS credits) awarded by an accredited higher education institution. The institution must be recognised within its national higher education system and listed in the World Higher Education Database (WHED). Applicants who have not yet completed their bachelor's degree at the time of application may also apply. In such cases, admission is granted conditionally upon successful completion of the degree before enrolment. Non-native English speakers must demonstrate proficiency in English through an internationally recognised qualification equivalent to at least level B2 of the Common European Framework of Reference for Languages (CEFR).

The application procedure is documented in detail in the SER, including screenshots illustrating the online application process. Each application undergoes an initial administrative verification to ensure compliance with the formal eligibility requirements. Applications meeting these requirements proceed to the academic evaluation phase, during which criteria such as academic preparedness for advanced studies in Data Engineering and Artificial Intelligence, the quality and relevance of the motivation letter, the strength and specificity of recommendation letters, the alignment of the applicant's profile with the programme learning outcomes, and the capacity to successfully complete the DEAI programme are assessed.

This process results in a pre-selected pool of applicants who proceed to a further evaluation stage, during which applications are distributed among partner institutions for independent assessment. Finally, a joint Selection Committee composed of representatives of all partner institutions meets to consolidate the evaluations and establish the final ranking of applicants.

Based on the documentation provided and the information obtained during the online site visit, the review panel considers the admission requirements and selection procedures to be transparent, fair, and appropriate for the level and disciplinary profile of the DEAI programme.

Assessment of the review panel: The standard is **met**.

4.2. Recognition

Recognition of qualifications and of periods of studies (including recognition of prior learning) should be applied in line with the Lisbon Recognition Convention and subsidiary documents.

The information provided in the SER indicates that the recognition of qualifications and study periods within the DEAI programme is implemented in accordance with the principles of the Lisbon Recognition Convention and its subsidiary documents.

Recognition of prior qualifications is primarily addressed during the admission process. Applicants are required to hold a relevant bachelor's degree in Computer Science, Data Science, Artificial Intelligence, Mathematics, Engineering, or a closely related discipline. The SAC evaluates applications on the basis of the submitted documentation in order to

determine whether applicants possess the academic background and competences required for successful participation in the DEAI programme.

The DEAI programme also provides for the automatic recognition of study periods completed within the Consortium. ECTS credits obtained at partner institutions are mutually recognised, and the corresponding academic information is shared among the partner institutions. This facilitates student mobility and avoids unnecessary administrative procedures.

It is also stated in the SER that the recognition of prior learning is not currently applied within the DEAI programme. During the online site visit, the Consortium explained that a formal procedure for the recognition of prior learning has not yet been implemented, as the DEAI programme has been designed as a highly integrated curriculum intended to ensure the achievement of the full set of programme learning outcomes. However, the Consortium indicated in the additional information provided after the online site visit that it intends to address this aspect within the programme regulations.

Based on the documentation provided and the information obtained during the online site visit, the review panel concludes that the arrangements for the recognition of qualifications and study periods are appropriate and consistent with the integrated nature of the DEAI programme.

Assessment of the review panel: The standard is **met**.

5. Learning, Teaching and Assessment [ESG 1.3]

5.1 Learning and teaching

The programme should be designed to correspond with the intended learning outcomes, and the learning and teaching approaches applied should be adequate to achieve those. The diversity of students and their needs should be respected and attended to, especially in view of potential different cultural backgrounds of the students.

According to the SER, the DEAI programme adopts a student-centred, research-informed, and practice-oriented pedagogical approach aligned with the intended learning outcomes of the programme. The DEAI programme combines theoretical foundations, laboratory work, project-based learning, research activities, and industry-oriented applications.

During the online site visit, the Consortium explained that the DEAI programme is intentionally designed to address the heterogeneous academic backgrounds of its students. In particular, the first semester is intended to harmonise prior knowledge and provide a common foundation in Data Engineering, Data Management, and Artificial Intelligence.

The review panel learned that practical and project-oriented learning activities constitute a central element of the DEAI programme. In the second semester, several course projects are integrated into a larger common project, while the Summer School, Summer of Code, and the Master's Thesis further support collaborative and research-oriented learning. Students are also encouraged to engage in scientific dissemination activities through poster presentations, mock research papers, and research methodology courses.

The Consortium further stated that diversity and inclusiveness are important objectives of the DEAI programme. Students from different academic, cultural, and geographical

backgrounds are intentionally recruited, and mobility across partner institutions is considered a key pedagogical element.

The review panel examined the pedagogical approach of the DEAI programme and found that the learning and teaching methods are well aligned with the intended learning outcomes and appropriate for a second-cycle international joint Master's programme.

The review panel particularly appreciated the strong emphasis on project-based learning, research activities, and the practical application of knowledge. The combination of laboratory work, integrated projects, research methodology training, poster sessions, and thesis work provides students with multiple opportunities to develop both technical and transversal competences in line with the programme objectives.

The review panel also positively notes that the Consortium demonstrates a clear awareness of the diversity of the student population and of the challenges associated with international mobility and heterogeneous academic backgrounds. The first-semester leveling approach is appropriate and well justified.

Assessment of the review panel: the standard is **met**.

Recommendation

The review panel recommends that the Consortium continue strengthening common guidelines regarding the pedagogical use of AI tools in learning and assessment activities in order to ensure a consistent student experience across all partner institutions.

Commendation

The review panel congratulates the Consortium on the strong integration of project-based, research-oriented, and mobility-based learning approaches throughout the DEAI programme and on the evident commitment of the teaching staff to fostering student engagement and active learning.

5.2 Assessment of students

The examination regulations and the assessment of the achieved learning outcomes should correspond with the intended learning outcomes. They should be applied consistently among partner institutions.

According to the SER and the discussions during the online site visit, assessment methods within the DEAI programme include written examinations, laboratory work, practical assignments, individual and group projects, oral presentations, and the Master's Thesis. These assessment methods are designed to evaluate theoretical knowledge, technical competences, problem-solving abilities, teamwork, and communication skills in alignment with the intended learning outcomes.

The review panel found that the variety of assessment methods is appropriate for the DEAI programme and supports the assessment of both disciplinary and transversal competences. The assessment methods are consistent with the learning outcomes and the curriculum structure and contribute to the constructive alignment of the DEAI programme.

The Master's Thesis is jointly supervised and evaluated across partner institutions. Common rubrics and grading criteria are used to support transparency and consistency in the assessment of thesis work. During the online site visit, the Consortium explained that grading conversion tables and normalisation procedures are applied across institutions in order to maintain comparability between national grading systems.

The Consortium further stated that assessment practices are regularly discussed during coordination meetings and among lecturers participating in the Summer School. The review panel learned that some assessment practices remain defined locally by the partner institutions and individual lecturers, including the balance between written examinations, oral examinations, and group work.

During the online site visit, the Consortium acknowledged that the increasing use of Generative AI tools raises new challenges regarding assessment and academic integrity. The review panel was informed that discussions on common approaches are ongoing, while several partner institutions currently rely on local policies and practices. The Consortium explained that in-person assessment elements and laboratory examinations are used in several courses to mitigate risks related to the misuse of AI tools and free-riding in group work.

Students from the predecessor programme BDMA interviewed during the online site visit confirmed that assessment methods differ somewhat between partner institutions, although they generally considered the overall level of difficulty and expectations to be comparable.

The review panel found that the assessment methods are generally appropriate and aligned with the intended learning outcomes of the DEAI programme. The combination of different assessment methods enables the assessment of both technical and transversal competences. At the same time, the review panel observed that assessment practices continue to depend partly on local institutional traditions and individual lecturers. While such flexibility is understandable in an international joint programme, the review panel considers that further formalisation of common assessment principles and expectations at Consortium level would strengthen transparency and consistency for students.

The review panel appreciates that the Consortium is aware of the challenges related to Generative AI tools and academic integrity and has already begun discussing common approaches to address these issues. Continued efforts in this area will contribute to maintaining consistency across the Consortium.

Assessment of the review panel: the standard is **met**.

Recommendation

The review panel recommends that the Consortium further formalise common assessment principles and guidelines across partner institutions, including shared approaches to academic integrity, and to the balance between individual and group assessment activities.

Commendations

The review panel positively noted the Consortium's efforts to maintain consistency across institutions through grading conversion mechanisms, joint thesis evaluation procedures, and regular coordination among academic staff. The use of integrated projects and research-oriented assessment tasks further supports the coherence of the DEAI programme.

6. Student Support [ESG 1.6]

The student support services should contribute to the achievement of the intended learning outcomes. They should take into account specific challenges of mobile students.

According to the SER, student support is organised at two levels. At the consortium level, the Programme Coordinator and the Local Administrative Manager at ULB form a central programme contact point. They are available for programme-related matters and coordinate communication between students and the partner institutions. At the local level, Local Academic Coordinators and Local Administrative Managers assist students during their stay at the respective partner institution.

The Local Administrative Managers of the five partner institutions collectively support students with admission procedures, enrolment processes, mobility planning, and general programme-related administrative matters. Administrative support, including admission, enrolment, and mobility planning, is therefore provided primarily at the Consortium level, while academic support is delivered at the local level.

Support for mobility is coordinated at consortium level but is mostly provided locally in cooperation with the international offices of the partner institutions. During the online site visit, the review panel asked about the English language proficiency of local support staff. The Consortium explained that this has not posed difficulties in the past, as all partner institutions have extensive experience in hosting international students and can rely on international offices to ensure appropriate English-language support.

The Consortium indicated that local welcome sessions and guidance services are organised at each partner institution to support students' integration into the respective academic and cultural environments. Guidance, counselling, and well-being services are also provided at the local level.

During the online site visit, the Consortium's representatives confirmed that all partner institutions provide high-quality student support. The review panel also considers the partner institutions' quality assurance arrangements governing student support services. Students and alumni from the predecessor programmes confirmed that the support available at participating partner institutions was adequate. However, this implies that student support is partly decentralised, with each partner institution remaining responsible to a certain extent.

According to the information provided during the online site visit, local regulations and support mechanisms for students with special needs or disabilities are in place at all partner institutions. The Consortium explained that support for such students is coordinated both centrally and locally in order to ensure continuity throughout the mobility pathway.

As stated in the SER, the Consortium is aware of gender imbalances in the field and actively seeks to address them. Particular attention is paid to gender balance within the programme's governance and committee structures. The Consortium also engages in promotion activities aimed at encouraging women to apply to the DEAI programme.

The Consortium Agreement states that the EB decides on the status of students who fail a resit examination and may allow them to proceed, graduate, or leave the DEAI programme. During the online site visit, the review panel asked why students are not formally entitled to a study delay. The Consortium clarified that, in cases of exceptional circumstances such as illness or other personal circumstances, solutions are sought on a case-by-case basis. Furthermore, the Consortium mentioned some examples from predecessor programmes in which students were able to complete the programme with a delay due to personal circumstances. This reassured the review panel that the Consortium takes such circumstances into account. Nevertheless, the review panel considers it unfortunate that these possibilities are not formally documented in the Consortium Agreement or related regulations, as students therefore do not have a clearly defined entitlement to request a study delay.

The review panel finds that the Consortium has established a coherent framework for student support. The positive experience gained through the predecessor programmes IT4BI and BDMA provides confidence that students enrolled in the DEAI programme will receive appropriate academic, administrative, and personal support throughout their mobility pathway.

Assessment of the review panel: The standard is **met**.

Recommendations

The review panel recommends the Consortium to seek for ways to provide student support at the overall joint programme level, in addition to the support guaranteed by the individual partner institutions.

The review panel recommends that the Consortium formally establish and document procedures for granting study delays in justified cases, thereby ensuring transparency and certainty for students facing exceptional personal circumstances.

Commendations

The review panel commends the Consortium for its proactive efforts to promote gender balance and inclusiveness, including the representation of women in programme leadership and governance structures and the implementation of targeted outreach activities aimed at increasing the participation of women in the DEAI programme.

The review panel also appreciates the Consortium's efforts to provide coordinated support for students across the mobility pathway, including support for students with special needs. The planned high level of academic and administrative support is expected to contribute positively to student progression and well-being.

7. Resources [ESG 1.5 & 1.6]

7.1 Staff

The staff should be sufficient and adequate (qualifications, professional and international experience) to implement the study programme.

According to the SER, the DEAI programme is delivered by academic staff with strong research profiles and extensive experience in Data Engineering, Artificial Intelligence, and Erasmus Mundus Joint Master programmes. The partner institutions contribute complementary expertise in areas such as Data Management, Distributed Systems, Machine Learning, Graph Data Management, Process Mining, Symbolic AI, and Heterogeneous Systems.

The SER contains a list of academic and administrative staff members. The review panel verified that the teaching team includes experienced professors, associate professors, assistant professors, researchers, and industry experts involved in teaching, supervision, and project-based activities.

During the online site visit, the Consortium explained that staff members are selected by the partner institutions according to their local hiring procedures and qualification requirements. The Consortium further indicated that the DEAI programme relies predominantly on permanent academic staff from the partner institutions, while external lecturers and associated partners contribute to specialised topics, seminars, summer schools, and project activities.

The review panel also learned that the DEAI programme benefits from strong links between teaching and research activities. Several lecturers are actively involved in European research projects and collaborate with industrial partners, who also contribute to thesis supervision, project definition, and applied case studies. The Consortium explained that no dedicated temporary teaching contracts funded directly by the DEAI programme are currently planned and that teaching is mainly integrated into the regular academic structures of the partner institutions.

The review panel found that the DEAI programme benefits from a highly qualified and internationally experienced academic team whose expertise is well aligned with the programme's objectives and intended learning outcomes. It particularly appreciated the complementary expertise contributed by the different partner institutions and the strong integration between research, teaching, and industrial applications. The involvement of experienced researchers and industry collaborators substantially strengthens the academic and professional relevance of the DEAI programme.

The review panel also positively notes that the Consortium benefits from extensive experience in the organisation of international Joint Master Programmes and from highly committed teaching and administrative staff. Interviews with students and alumni confirmed the high level of engagement and accessibility of the lecturers.

The review panel observed that some information related to staffing structures, including contract categories and workload distribution between research and teaching activities, is primarily managed at institutional level and therefore cannot be fully harmonised across the Consortium. While this reflects national differences between higher education systems, the panel considers that the overall staffing arrangements are appropriate.

The review panel also noted that the Consortium actively monitors supervision capacity and aligns student enrolment with the availability of supervisory resources, thereby helping to ensure adequate support for students throughout the DEAI programme.

The review panel found that the academic and administrative staffing resources are sufficient to support the delivery of the DEAI programme and the achievement of its intended learning outcomes. The Consortium benefits from experienced staff, appropriate supervision capacity, and well-established organisational structures across the partner institutions.

Assessment of the review panel: the standard is **met**.

Commendations

The review panel congratulates the Consortium on assembling a highly qualified and internationally experienced teaching team that combines strong research expertise with substantial experience in international joint programme delivery and a clear commitment to student engagement and programme development.

7.2 Facilities

The facilities provided should be sufficient and adequate in view of the intended learning outcomes.
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According to the SER, students enrolled in the DEAI programme have access to the teaching, computing, library, and research infrastructures of all partner institutions. The partner institutions provide modern classrooms, computer laboratories, digital learning platforms, high-performance computing resources, online libraries, and campus-wide

network access. As the site visit took place online, the Consortium submitted photographic and written documentation showcasing the facilities available at each of the five main partner institutions.

During the online site visit, the Consortium explained that students receive local institutional accounts and access credentials at each mobility destination. Administrative and technical support is coordinated centrally and locally to ensure that students can access the required systems and facilities before the beginning of each mobility period.

The review panel learned that partner institutions currently operate different local IT ecosystems and learning management systems, including separate Moodle platforms and institutional infrastructures. The Consortium acknowledged that a fully integrated common platform across all institutions is currently not feasible. However, students receive guidance documents, local orientation sessions, and continuous administrative support throughout the mobility pathway.

The DEAI programme further benefits from access to advanced research infrastructures and high-performance computing facilities supporting AI and large-scale data processing activities. Industrial and research partners additionally provide students with access to realistic datasets, applied projects, and research environments.

During the online site visit, the Consortium explained that information for students is distributed through multiple channels, including websites, orientation sessions, Moodle platforms, local international offices, and dedicated contact persons. The review panel noted that, although extensive information is available, no single consolidated handbook or unified digital platform currently exists for the entire Consortium.

The review panel found that the facilities and infrastructure available to students are of a very high standard and fully appropriate for a Joint Master programme in Data Engineering and Artificial Intelligence. The review panel particularly appreciated the strong computing infrastructure and access to advanced research and industrial environments supporting practical and research-oriented learning activities. The availability of high-performance computing resources, specialised laboratories, and industry-related projects strongly supports the achievement of the intended learning outcomes.

The review panel also positively notes that students benefit from coordinated access to facilities and resources throughout the mobility pathway, supported by local orientation activities and administrative assistance at each partner institution. At the same time, the review panel observed that the multiplicity of local IT systems, learning platforms, and administrative procedures may create some complexity for students moving between partner institutions.

Overall, the review panel concludes that the DEAI programme provides high-quality facilities, learning resources, and infrastructure that are fully adequate for the successful delivery of the joint programme. The strong teaching, research, and computing infrastructures create an excellent learning environment for students.

Assessment of the review panel: the standard is **met**.

Recommendation

The review panel recommends that the Consortium further harmonise and centralise practical information related to IT systems, access procedures, communication channels, and student guidance documentation across partner institutions, for example through a shared information repository or consolidated student handbook, in order to enhance the student experience throughout the mobility pathway.

Commendations

The review panel congratulates the Consortium on providing students with access to excellent research and computing infrastructures across all partner institutions. Combined with well-coordinated mobility arrangements and effective access to academic resources, these facilities create a particularly strong learning environment for an international Joint Master programme.

8. Transparency and Documentation [ESG 1.8]

Relevant information about the programme like admission requirements and procedures, course catalogue, examination and assessment procedures etc. should be well documented and published by taking into account specific needs of mobile students.

The SER refers to the programme website (<https://deai.ulb.be>), which provides comprehensive and up-to-date information for prospective and current students.

At the time of the review, the website contained:

- A description of the overall structure of the programme, including the timeline, specialisation paths, and corresponding mobility schemes.
- Information on the courses offered in each semester, together with a downloadable PDF containing the complete curriculum, intended learning outcomes, assessment procedures, and assessment breakdown.
- The DEAI Admission Manual in PDF format, including detailed information on eligibility requirements, admission procedures, and the application calendar. The website also provides a link to the online application platform (<https://deai.ulb.ac.be/emundus/>)
- Contact information and a contact form for prospective applicants and students.

During the online site visit, the Consortium explained that TUW is responsible for maintaining and updating the website. It further stated that no formal accessibility audit of the website had yet been conducted.

The review panel found that the Consortium provides comprehensive and transparent information regarding the DEAI programme structure, mobility arrangements, curriculum, and admission requirements. At the same time, the review panel emphasises the importance of ensuring that this information is accessible to all prospective applicants and students.

Assessment of the review panel: the standard is **met**.

Recommendation

The review panel recommends that the Consortium conduct an accessibility audit of the programme website and associated downloadable documents in PDF format, including the course programme and admission manual, in order to ensure that information is accessible to all prospective and current students.

Commendation

The review panel commends the Consortium for providing comprehensive and transparent information on the programme structure, curriculum, mobility pathways, and admission procedures through the programme website.

9. Quality Assurance [ESG 1.1 & part 1]

The cooperating institutions should apply joint internal quality assurance processes in accordance with part one of the ESG.

Joint quality assurance processes in place should adequately reflect and be in accordance with ESG 1.1 & part one of the ESG:

- Policy (ESG 1.1)
- Design and approval of programmes (ESG 1.2)
- Student - centred learning, Teaching and Assessment (ESG 1.3)
- Student Admission, Progression Recognition and Certification (ESG 1.4)
- Teaching staff (ESG 1.5)
- Learning resources and student support (ESG1.6)
- Information Management (ESG 1.7)
- Public Information (ESG (1.8)
- On - going monitoring and periodic review of programmes (ESG 1.9)
- Cyclical External Quality Assurance (ESG 1.10)

From both the SER and the online site visit, it is clear that much of the quality assurance is organised at the institutional level. All partner institutions operate within national quality assurance systems that are aligned with the ESG and subject to external quality assurance arrangements recognised within the EHEA. For a large part, the DEAI programme therefore relies on institutional quality assurance mechanisms. This chapter focuses on quality assurance arrangements at Consortium level and on quality assurance aspects that are specific to this programme.

ESG 1.1 Policy for Quality Assurance

According to the SER, the DEAI programme has a shared quality assurance framework governed by the QMC. It meets at least twice a year and consists of representatives from all partner institutions, students, staff, and industry.

The shared quality assurance framework is operationalised through a strategic document that defines jointly agreed quality assurance procedures. This framework is supported by local offices that ensure the local implementation of the quality assurance plan.

During the online site visit, representatives of the Consortium also stated that an AB meets annually to provide external input and advice.

ESG 1.2 Design and approval of programs

It is stated in the SER that the curriculum was designed and will be updated according to jointly defined procedures involving partner institutions and stakeholders. During the online site visit, representatives of the Consortium explained that the DEAI programme had indeed been developed through an iterative process. This process primarily involved the main partners, while associated partners were consulted and involved at various stages.

ESG 1.3 Student-centered learning, teaching and assessment

It is stated in the SER that the DEAI programme adopts a student-centred approach, although it does not describe in detail how this is implemented at Consortium level. During the online site visit, the Consortium explained several ways in which students are able to shape their individual learning pathways. The DEAI programme covers both industry-oriented and research-oriented topics and cases, allowing students to choose areas in which they wish to develop further. In addition, students are offered choices through projects and elective components. The Consortium deliberately incorporated a substantial amount

of project-based learning to provide students with flexibility in shaping their learning experience.

ESG 1.4 Student admission, progression, recognition and certification

The student admission process has been continuously reviewed and refined through the predecessor programmes IT4BI and BDMA. This gives the review panel confidence that the Consortium will continue to monitor and improve the admission process.

Furthermore, it is stated in the SER that progression and credit recognition are harmonised across the Consortium. See Standard 4 for further information on this topic.

ESG 1.5 Teaching staff

The quality assurance of teaching staff is regulated at the institutional level. Each partner institution has its own procedures for ensuring the quality of teaching staff. During the online site visit, the Consortium added that considerable attention had been paid to the selection of partner institutions in order to ensure the availability of highly qualified staff.

ESG 1.6 Learning resources and student support

It is stated in the SER that the effectiveness of student support is monitored as part of the quality assurance framework. Feedback is collected every semester to assess whether support mechanisms effectively contribute to students' academic success. In addition, contact with student representatives is used to identify opportunities for improving student learning and support services.

ESG 1.7 Information management

The DEAI programme collects information on student progression and student satisfaction. See ESG 1.9 below for further information.

ESG 1.8 Public Information

Information about the DEAI programme is published on the joint website and is maintained and updated by the Consortium. Compliance with this ESG is discussed in more detail under Standard 8, Transparency and Documentation in this report.

ESG 1.9 On-going monitoring and periodic review of programmes

Course evaluations take place both at Consortium level and at institutional level. The Consortium has developed common course surveys that are used to collect student feedback. Furthermore, each partner institution operates its own local course monitoring systems.

During the online site visit, the representatives of the Consortium also stated that it is relatively easy to adjust courses, but still challenging due to being bound by national frameworks. Nonetheless, none of the institutions is in a country that does not allow course revision without accreditation.

Some academic staff members from the partner institutions meet regularly to discuss the curriculum in greater detail and to identify potential course overlaps or gaps. During the online site visit, however, the review panel learned that the Consortium has not specified to what extent all lecturers, or lecturers teaching related subjects, participate systematically in these discussions.

When asked whether students are informed about actions taken in response to their feedback, the review panel received mixed answers. Some lecturers communicate such changes directly to students. Students also exchange information informally across different cohorts, and in this way often become aware of modifications to the DEAI

programme. Nevertheless, these feedback mechanisms remain relatively informal and could benefit from further formalisation.

ESG 1.10 Cyclical external quality assurance

According to the SER, the DEAI programme is subject to external quality assurance under the European Approach for Quality Assurance of Joint Programmes. Furthermore, all partner institutions undergo periodic external quality assurance evaluations in accordance with national requirements.

Overall, the review panel found that the DEAI programme is supported by an appropriate quality assurance framework combining Consortium-level procedures with established institutional quality assurance systems. The arrangements in place provide a solid basis for the monitoring, evaluation, and continuous improvement of the DEAI programme.

Assessment of the review panel: the standard is **met**.

Recommendation

The review panel recommends implementing a formal process to keep students informed on a regular basis about actions and changes resulting from student feedback.

Summary and final evaluation

1. Eligibility

All partner institutions meet the eligibility requirements for participation in the DEAI programme and possess the necessary degree-awarding rights. The programme has been jointly designed and will be jointly delivered by the Consortium partners, supported by associated academic and industrial partners. The Consortium Agreement provides a clear framework for governance, financing, quality assurance, mobility, and degree-awarding arrangements.

2. Learning Outcomes

The intended learning outcomes are appropriate for a second-cycle programme and well aligned with the programme's focus on Data Engineering and Artificial Intelligence. The learning outcomes adequately reflect advanced disciplinary knowledge, technical competences, research skills, and ethical, legal, and societal responsibilities.

3. Study Programme [ESG 1.2]

The curriculum is coherent, progressive, and well aligned with the intended learning outcomes. The DEAI programme benefits from a distinctive profile at the intersection of Data Engineering and Artificial Intelligence and builds on the Consortium's extensive experience with previous Erasmus Mundus programmes. The review panel recommends further strengthening curriculum coordination across partners and ensuring that all students acquire a common foundation in the ethical, legal, and societal aspects of AI, irrespective of their chosen mobility path.

4. Admission and Recognition [ESG 1.4]

The admission requirements and selection procedures are transparent, fair, and appropriate for the level and profile of the programme. The jointly managed selection process is well structured and benefits from the Consortium's extensive Erasmus Mundus experience. Recognition of qualifications and study periods is implemented in accordance with the Lisbon Recognition Convention. The Consortium intends to address the recognition of prior learning within the programme regulations.

5. Learning, Teaching and Assessment [ESG 1.3]

The learning and teaching approach is well aligned with the intended learning outcomes and particularly appreciated the strong emphasis on project-based, research-oriented, and mobility-based learning. Assessment methods are varied and appropriate for evaluating both technical and transversal competences. The review panel recommends further harmonising assessment practices and developing common approaches to the pedagogical use of AI tools and academic integrity.

6. Student Support [ESG 1.6]

The Consortium has established a coherent framework for student support combining central coordination with local services at the partner institutions. Particular strengths include the support provided throughout the mobility pathway and the Consortium's attention to promote diversity and gender balance. The review panel recommends formalising procedures for study delays for exceptional circumstances.

7. Resources [ESG 1.5 & 1.6]

The programme is supported by highly qualified academic and administrative staff and by excellent teaching, research, library, and computing facilities across the Consortium. The complementary expertise of the partner institutions and the strong links between research, teaching, and industry provide a solid basis for the successful delivery of the programme. Further harmonisation of information resources and digital access procedures would enhance the student experience across mobility locations.

8. Transparency and Documentation [ESG 1.8]

Comprehensive and transparent information about the programme is publicly available through the programme website. The review panel recommends conducting a formal accessibility audit of the website and associated documents to ensure that information is accessible to all prospective and current students.

9. Quality Assurance [ESG 1.1 & part 1]

The programme is supported by a comprehensive quality assurance framework combining consortium-level procedures with established institutional quality assurance systems. The framework provides a solid basis for monitoring, evaluation, and continuous improvement. The review panel recommends strengthening the formal feedback loop by ensuring that students are regularly informed about actions taken in response to their feedback.

The review panel recommends to the Board of AQ Austria the accreditation of the Joint Master Degree in 'Data Engineering and Artificial Intelligence', conducted in Brussels, Barcelona, Vienna, Padova, Lyon by Université Libre de Bruxelles.

Viewed documents

- Application for the accreditation of the Joint Master Degree in Data Engineering and Artificial Intelligence, conducted in Brussels, Barcelona, Vienna, Padova, Lyon, by the Université Libre de Bruxelles received on 01/03/2026 in the version of 23/03/2026
- Subsequent documents submitted prior to the site visit, received on 17/04/2026
- Subsequent documents submitted after the site visit, received on 22/04/2026
- Subsequent documents submitted after the site visit, received on 06/05/2026

Glossary

Short and long forms of frequently used terms	
AB	Advisory Board
ACC	Academic Cooperation Committee
AI	Artificial Intelligence
BDMA	Big Data Management and Analytics
DEAI	Data Engineering and Artificial Intelligence
EB	Executive Board
ECTS	European Credit Transfer System
EEB	External Evaluation Board
EQF	European Qualifications Framework
ESG	Standards and Guidelines for Quality Assurance in the European Higher Education Area
FQ-EHEA	Framework for Qualifications in the European Higher Education Area
HEI	Higher Education Institution
ISCED	International Standard Classification of Education
IT4BI	Information Technologies for Business Intelligence
LCOs	Local Coordination Offices
POC	Promotion and Outreach Committee
QMC	Quality Management Committee
SAC	Student and Alumni Committee
SC	Sustainability Committee
SER	Self-evaluation report
TUW	Technische Universität Wien
UCBL	Université Claude Bernard Lyon 1

ULB	Université libre de Bruxelles
UniPd	University degli Studi di Padova
UPC	Universitat Politècnica de Catalunya