



Accreditation Report

Internal audit procedure within the framework of system accreditation

Study Programme: Master Management & Data Science (M.Sc.)

Date of the expert report: 18 November 2021

Leuphana University Lüneburg has been system accredited since 2014 and conducts the accreditation of its study programmes under its own responsibility. With the award of the Quality Seal, Leuphana confirms that a study programme meets the criteria of the Lower Saxony Study Accreditation Ordinance (Nds. StudAkkVO) and that this has been verified in a procedure by external experts (programme Advisory Board). In accordance with the guidelines for quality reports (Drs. AR 85/2019), the accreditation report includes the audit process, a short profile of the programme, the names of the experts, the evaluation of the programme by the programme Advisory Board and the agreed measures for the further development of the programme.

The Internal Audit Procedure is coordinated by the staff unit Quality Development (Team Q). Usually it replaces the external programme accreditation of study programmes and is regulated in the [QE-guideline](#) (Guideline of the Presidential Board on Quality Development of Studies and Teaching – available in German only).

A) Process of the Internal Audit Procedure

Kick-off Meeting

In a **kick-off meeting**, study programme directors, representatives of the School, the Dean's Office and Team Q clarify the procedure and responsibilities in the process and schedule important milestones in a written agreement.

Documentation

The so-called programme folder documents all essential information on the study programme. For the following evaluation process, the programme directors describe the profile, the learning outcomes, the curriculum and the resources used analogous to the audit mandate of the programme Advisory Board.

Evaluation

Leuphana University Lüneburg sets up independent **programme Advisory Boards** for all study programmes, partial study programmes and overarching study programme elements. In the case of teaching training-related study programmes, the Lower Saxony Ministry of Cultural Affairs and the regional church for the subject Protestant Religion are included. The programme Advisory Board evaluates compliance with the subject-related criteria for study programmes of the Nds. StudAkkVO1 (§§ 11 to 16 as well as 19 to 20). For this purpose, the Advisory Board receives the programme folder and conducts discussions with programme directors and students. In its meeting, the programme Advisory Board evaluates the study programme and submits a written statement. In an **audit report**, Team Q combines this evaluation of the programme Advisory Board with the evaluation of the formal accreditation criteria according to the Nds. StudAkkVO1 (§§ 3 to 10) and prepares a consultation template for the development agreement.

Development Agreement

For the development discussion, the programme directors propose measures through which the requirements of the external programme Advisory Board can be implemented. These proposals are examined and, if necessary, modified in an internal university **development discussion**. Comparable to an "internal accreditation commission", it is here determined which of the criticisms and recommendations are to be rectified or implemented by when and by whom. The results are usually confirmed by consensus of all members entitled to vote and documented in a development agreement. If an agreement is not possible, defined escalation levels

[Stabsstelle Qualitätsentwicklung | Team Q](#)

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take effect. In the case of teaching training-related study programmes, the Lower Saxony Ministry of Cultural Affairs and the regional church for the subject Protestant Religion are included in this step of the process.

Awarding of the Leuphana Quality Seal and Monitoring

Once the development agreement has been signed by all members of the development meeting entitled to vote, a written confirmation of the accreditation decision by the Lower Saxony Ministry of Cultural Affairs follows for the teaching training-related study programmes. Subsequently, the Presidential Board awards the **Leuphana Quality Seal** for Studies and Teaching. Team Q is responsible for **monitoring** the implementation of measures, and the final decision is made by the Executive Board.

¹Niedersächsische Verordnung zur Regelung des Näheren der Studienakkreditierung (Niedersächsische Studienakkreditierungsverordnung — Nds. StudAkkVO) vom 30. Juli 2019, Nds. GVBl. Nr. 13/2019, ausgegeben am 09.08.2019.

B) Results of the Internal Audit Procedure of the Master Management & Data Science (M.Sc.)

Profile of the study programme	<p>The English-speaking Master's programme Management & Data Science teaches methodological basics and advanced knowledge in the field of data-driven modelling and enables students to analyse and interpret large and complex data sets. Starting from mathematical basics, different classes of learning methods are theoretically analysed (e.g. neural networks, probabilistic models, etc.) and practically tested in applied modules and tutorials. In addition, students will intensively deal with the entrepreneurial and societal opportunities (business models of Data Science) and risks (appropriate privacy approaches, ethical framework) of Big Data.</p> <p>The programme is aimed at students from all disciplines worldwide who wish to further their education to become subject-specific Data Scientists and thus participate in the responsible development of Data Science strategies in companies and/or public administrations, or who wish to pursue an academic career.</p> <p>Information about the study programme can be found here:</p> <ul style="list-style-type: none"> • Leuphana Internet • Hochschulkompass • Database of the German Accreditation Council (available in German only) 										
	<p>Embedding in Leuphana University Lüneburg: Faculty: Faculty of Business and Economics School: Graduate School</p>										
Reason of the Quality Evaluation	Reaccreditation for the Master Management & Data Science (M.Sc.)										
Timing of the procedure	<table border="0"> <tr> <td>Date of the kick-off meeting</td> <td>10 November 2020</td> </tr> <tr> <td>Programme folder (Self documentation)</td> <td>25 March 2021</td> </tr> <tr> <td>Date of the Advisory Board meeting</td> <td>14 April 2021</td> </tr> <tr> <td>Date of the Development Discussion</td> <td>21 October 2021</td> </tr> <tr> <td>Awarding of the Quality Seal</td> <td>13 December 2021</td> </tr> </table>	Date of the kick-off meeting	10 November 2020	Programme folder (Self documentation)	25 March 2021	Date of the Advisory Board meeting	14 April 2021	Date of the Development Discussion	21 October 2021	Awarding of the Quality Seal	13 December 2021
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Composition of the expert group (Programme Advisory Board)	<p>Science and Research:</p> <ul style="list-style-type: none"> • Prof. Dr. Myra Spiliopoulou, Faculty of Computer Science, Otto-von-Guericke-University Magdeburg 										



	<ul style="list-style-type: none">• Prof. Dr. Mark Hoogendoorn, Department of Computer Science, Vrije Universiteit Amsterdam Professional Practice: <ul style="list-style-type: none">• Nils Grabbert, VP Engineering & Data, NumberFour AG, Berlin Student Representative: <ul style="list-style-type: none">• Thomas Robert Holy, Student Master Programme in Business Administration, Friedrich Schiller University Jena
Legal basis of the evaluation	<ul style="list-style-type: none">• State Treaty on the Accreditation of Studies• Nds. StudAkkVO Part 2 and Part 3
Content basis of the evaluation	<ul style="list-style-type: none">• Self-Report including appendix• Conversations of the programme Advisory Board with following people/groups:<ul style="list-style-type: none">○ Programme Director○ Lecturers○ Students
Results of the Evaluation	<p>All in all, the members of the Advisory Board approve the study programme. They assess the profile of the study programme as coherent and the qualification goals for a Master's programme as appropriate in terms of level and content. The objectives and learning outcomes correspond to both professional and scientific standards.</p> <p>The programme Advisory Board positively evaluates the approach of deliberately opening the programme to a broad range of disciplines in order to teach Data Science in an interdisciplinary and transdisciplinary manner and to promote diversity. However, the programme Advisory Board also sees the potential problem that graduates of bachelor's programmes with a lower subject proximity might lack the necessary prerequisites, especially in the field of programming. The programme Advisory Board therefore welcomes the development and prompt introduction of a subject-specific admission test. In doing so, however, the programme Advisory Board points out that the introduction of an admissions test should not come at the expense of diversity. This possible conflict of goals should also be kept in mind while evaluating the admission process and the admission test. In addition, the possibility of preparatory tests should be examined. Mandatory programming courses, e.g. as summer-skill courses, could also be a possible solution in this context.</p> <p>According to the Advisory Board, the sequel of the modules follows a sensible structure. Regarding the workload, however, the programme Advisory Board emphasizes that the large number of 5CP modules results in very many examinations. This could lead to a situation in which the students' workload is too high. The programme advisory committee therefore recommends to keep the workload balanced across modules and to evaluate that.</p> <p>The Master's programme provides graduates with a good level of professional skills. The programme Advisory Board suggests that students should be able to take elective modules from other master's programmes more systematically in the future, for example, in order to be able to acquire an additional legal certificate analogous to the Gender Diversity Certificate.</p> <p>All in all, the programme Advisory Board confirms that the resources allocated to the programme (positions, denominations, rooms & equipment) allow for an adequate implementation of the curriculum. Furthermore, the results of the internal QM procedures have been sufficiently considered in the programme development.</p> <p>As a final point, the Advisory Board notes that the complementary studies complement the subject-related contents of the Master's programme in a meaningful way and contribute to the achievement of the interdisciplinary qualification goals.</p>



Measures for further development	<p>Based on the above-mentioned evaluation of the programme Advisory Board, the following measures were decided on within the framework of the internal university development discussion:</p> <ol style="list-style-type: none">(1) The online student entrance test will be evaluated and results will be reported as part of the monitoring process. At that time, a review will be conducted together with the Leuphana Graduate School to determine if mandatory programming skills need to be communicated more prominently on the website or included in the list of consecutive subjects.(2) The Forecasting and Simulation module (2nd semester) will be revised for content and, if necessary, a corresponding change of the Subject-Specific Schedule (FSA) will be implemented. <p>Additional Notes:</p> <ul style="list-style-type: none">• Effects of the entrance test on the heterogeneity of the student body should continue to be monitored.• In the next quality circle, students will be asked which modules from other study programmes at Leuphana could be interesting for a possible expansion of the elective offerings.
Decision on the Awarding of the Quality Seal of Leuphana	<p>With its decision of 13 December 2021, the Presidential Board awards the Master Management & Data Science (M.Sc.) the Quality Seal for Studies and Teaching for study programmes at Leuphana University Lüneburg. It thus confirms that this study programme meets the criteria of the Nds. StudAkkVO (Part 2 and Part 3) and that this has been verified in a procedure by external experts. The prerequisite for the specified period of validity of the Quality Seal is the signing of the cooperation agreement and the timely implementation of the measures stipulated in the development agreement. The monitoring of the measures is carried out by Leuphana Quality Management.</p>
Implementation of measures	<p>Fulfilled according to the decision of the Presidential Board on 14 December 2022</p>
Validity of the Quality Seal	<p>8 years – Duration from 01 October 2021 – 30 September 2029</p>