


INSTITUTIONAL & PROGRAMME ASSESSMENT

LUNEX INTERNATIONAL UNIVERSITY OF HEALTH, EXERCISE & SPORTS S.A.

- INSTITUTIONAL ASSESSMENT (VL009LUX-23)
- PROGRAMME ASSESSMENTS:
 - BACHELOR IN OSTEOPATHY (VL001LUX-23)
 - MASTER IN PHYSIOTHERAPY (VL002LUX-23)
 - MASTER IN SPORT AND EXERCISE SCIENCE (VL003LUX-23)

FINAL REPORT SUBMITTED TO THE MINISTRY OF RESEARCH AND HIGHER EDUCATION ON 4 MARCH 2024



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1 Executive Summary

The Hague, 22 december 2023

This document reports on the institutional assessment of LUNEX International University of Health, Exercise & Sports S.A., as well as on the assessment of the new Bachelor programme in Osteopathy that LUNEX intends to offer, and the Master programmes in Sports and Exercise Science, and in Physiotherapy.

The assessments are carried out by an international expert panel convened by the Accreditation Organisation of The Netherlands and Flanders (NVAO) on behalf of the Ministry of Research and Higher Education in Luxembourg. The panel studied the information materials put at disposition by LUNEX and discussed the state of play of both the institution and the programmes with a variety of stakeholders on 22-24 November 2023 at the LUNEX campus in Differdange. The panel presented its feedback on 24 November to the Ministry of Research and Higher Education in Luxembourg.

LUNEX is a private initiative and part of the Germany-based *Carl Remigius Fresenius Education Group* (COGNOS International SE). It was established in 2014 as a company to become a specialised higher education institution according to the legal framework in force in Luxembourg. LUNEX has been accredited as a specialised higher education institution by the Ministry of Research and Higher Education in Luxembourg since June 2015 and is currently offering Bachelor and Master programmes which are accredited: the bachelor programmes in Physiotherapy, in Sport and Exercise Science, in International Sport Management, in Nutrition Fitness and Health, in Corporate Health Management and Wellbeing, and the master programmes in Physiotherapy, in Sport and Exercise Science, in Sport Management and Digitalisation.

Institutional assessment

In so far as the institutional assessment is concerned, the panel judges the **first criterion as 'partially met'** and the other seven criteria as 'met'; its overall judgement is therefore **'partially met'**.

LUNEX' management has set out the ambition to be a leading international specialised higher education institution for sports and health in Europe; its mission is to deliver skilled graduates in the field of sports and health, lead innovative research that has an impact on society, provide students a good quality evidence-based educational experience, and enhance the national and international employability of its graduates. The panel considers that LUNEX has identified a niche in the Luxembourg higher education market: its English-language degree programmes attract a variety of local, regional and international students.

The governance of LUNEX is well organized with a clear division between stakeholders and management, which secures academic neutrality. The institution operates in line with the requirements of Luxembourg law in terms of financial accountability, degree programmes, recruitment policy and staff qualifications. Moreover, the panel considers that the facilities at LUNEX are adequate and allow to host both the current and forecasted number of students.

The panel thinks highly of the international profile of the institution and considers the multi-lingual and multi-cultural community of staff, lecturers and students as a clear asset to the different programmes. The panel appreciates the enthusiasm, dedication, and academic standing of the LUNEX team.

The panel appreciates the ambitions of the institution to stand out and deliver excellent quality in terms of education, teaching, research, international partnerships and internationalisation.

LUNEX has been growing since 2015 from a start-up into a fully-fledged higher education institute with specialised programmes. However, in line with this growth, LUNEX has not yet redefined its strategic direction and analysed whether this direction is appropriate.

In terms of risk assessment, LUNEX has not yet developed an up-to-date risk analysis and risk mitigation plan that fits with the current context of the institution (i.e. a growth in student numbers and programmes, the legal context and the rebranding that will be required when the use of the title 'university' will no longer be possible, together with the impact of that on LUNEX' position in the Higher Education market, its internationalisation policy and cooperation with institutions abroad).

To the panel, LUNEX must urgently define an up-to-date strategy to handle the challenges of a more mature institution, as well as the risks attached to the upcoming changes in the legal framework of higher education in Luxembourg (rebranding of LUNEX as regards to the title of 'university'). The panel considers the development of a risk assessment plan, along with the financial plan, as a key parts to the strategic plan.

The panel underlines the importance of the strategic positioning, also in relation to the need for a more focused internationalisation strategy. Further, in view of a growth scenario and with the development of new programmes, such as the Bachelor in Osteopathy, strategic positioning is essential for defining the needs and for understanding the opportunities and risks of programme development and implementation well in advance. Hereby, the panel sees clear benefit in the formalisation of the collaboration with external stakeholders to discuss the strategic direction and the achievement of strategic goals and risk mitigation. It recommends LUNEX to set up a formal interaction with its external stakeholders and the professional field for all its programmes.

Programme assessment

Moving from institutional to programme assessment, the panel has seen that LUNEX has organised its **quality assurance system** and its **research activities** very similarly across its programmes. Its overall appreciation is satisfactory for **standard 5 (standard 'met')**, but **'partially met'** for **standard 4**, and the **judgement** of these standards **applies to all programmes visited**.

The panel thinks highly of the attention LUNEX is paying to research and the way it is integrating this research into the education of its students. Through their training in research skills, their exposure to research-informed education and the opportunity to perform research in the research laboratory, LUNEX students acquire good academic and research competences.

Although the panel is positive with regards to the current Quality Assurance (QA) system on the level of the modules and programmes, it wants to share several recommendations. LUNEX has developed the necessary policies and procedures to deal with quality management and quality assurance. The panel welcomes the role of the Teaching and Learning Council as a committee to monitor and enhance quality assurance at the level of modules and programmes. Students evaluate each individual module and report that their comments are heard. It is to the credit of LUNEX that students feel at ease to voice their concerns openly and directly.

However, in view of the growth scenario set forward, the panel recommends working on a stronger, institutional process in the quality assurance system. Besides a need for the formal inclusion of criteria for the recruitment of external staff and lecturers in the institutional policy for recruitment of staff, the selection of internship partners and of international partnerships are areas where more guidance and strategic alignment is needed. The panel recommends working on the development of a standard for what is expected in relation to internships, along with establishing an operational monitoring process to ensure equivalence of student experience.

The panel also advises to develop institutional QA processes regarding the level of self-study for all existing and new study programmes. The self-study component of the programmes is considerable and requires clear monitoring and evaluation to ensure it is aligned with the attributed study load and contributes to the learning outcomes set forward.

Bachelor in Osteopathy

In relation to the new programme of **Bachelor in Osteopathy**, the overall judgment of the panel for the accreditation standards is '**not met**'. The panel assessed **standards one and three** as '**not met**', while **standards two and four** received a '**partially met**'.

From the information provided, the panel gathered that the set-up of the new programme and the content of the modules of the Bachelor in Osteopathy are strongly aligned with the Bachelor in Physiotherapy (54% overlap). The content of the modules for Osteopathy is mainly based on WHO benchmarks (2010), with a predominant focus on knowledge and skills, and a limited approach to transversal skills.

As LUNEX claims to aim for a new and more critical approach to Osteopathy, the panel finds a programme exclusively (or mainly) based on the WHO benchmarks too narrow. It also doubts that a curriculum with only 46% of ECTS dedicated to the field of Osteopathy is adequate to achieve all learning outcomes specific to Osteopathy.

Based on the accreditation material and the explanations received, it was not possible for the panel to assess the full quality of the Osteopathy programme. The material presented so far showed insufficient alignment between learning objectives and assessment methods and criteria. In addition, the panel could not observe explicit systematic didactical methods for training skills in Evidence-Based Practice. Given the limited information available with a focus on the domain of Osteopathy, the panel therefor considers that there is insufficient assurance that the intended exit level, and the exit level to be achieved of the Bachelor in Osteopathy reflects the current requirements that have been set for the programme by the professional field and the discipline from an international perspective.

Master in Physiotherapy

In so far as the **Master in Physiotherapy** is concerned, the overall judgment of the panel for the accreditation standards is '**not met**'. The panel assessed **standards one and three** as '**not met**', while **standards two and four** received a '**partially met**'.

The panel learned from the exchanges that LUNEX considered the reaccreditation of the Master programme as an opportunity for a revision of the curriculum. The revamped Master programme was presented as a programme with a strong emphasis on clinical reasoning, evidence-based practice, and rehabilitation research, together with hands-on learning and practical applications.

The quality of the academic program, including all new modules accounting for 50 ECTS, could however not be assessed by the panel beyond the level of the module handbook. LUNEX could not provide elaborated documents describing the new modules, as these are not yet ready. Instead, modules from the current programme were provided. The panel learned that the changes in the programme modules account for almost half of the Master programme credits; as it was only provided with the current (old) modules, it had insufficient information to assess the new, revamped programme that is submitted under the reaccreditation procedure.

Given the information about the new curriculum, it was also difficult to evaluate the horizontal and vertical integration in and between modules. A clearer view on the new building blocks of the curriculum, would have been useful to be reassured that coherence and integration is reached within and across modules, and leads to all the expected learning outcomes.

Regarding the estimated workload of the Master programme, particularly the ECTS attributed to the self-study time, it remains unclear to the panel how it is monitored and assessed that students benefit from the amount of self-study to reach the intended learning outcomes.

To the panel, the great variety in internships available to students of the Master in Physiotherapy, and the absence of a clearly set and agreed standard in terms of entry level, quality monitoring and quality improvement for the internships provided, creates uncertainty. The lack of assurance of the quality of the work field partners, and the absence of a clear structure or formalized expectations for the internships, do not allow the panel to conclude that - in all cases - internships are leading students to equal learning experiences that serve the intended exit level of a newly qualified, independent Physiotherapist.

The panel strongly recommends setting up a formal body with representatives of the work field for Physiotherapy, to discuss, improve, learn, and formalize issues regarding the structure, process, and outcome of the internships of students from the Physiotherapy programme.

Master in Sport and Exercise Science

The overall judgment of the panel for the accreditation standards for the programme of **Master in Sport and exercise Science** is '**partially met**'. The panel assessed all standards as '**met**', except **standard four** that received a '**partially met**'.

LUNEX proposes the Master in Sport and Exercise Science (MSES) as a multidisciplinary programme addressing human health and performance, with a focus on sport science for diagnostics and training in performance and health on the one hand and education and coaching on the other hand.

The panel was informed that LUNEX considered the reaccreditation of the Master programme as an opportunity for a revision of the curriculum, based on the needs of students, stakeholders and of the sector.

The revamped programme of the MSES is clearly described in the Accreditation document. It entails a relative change of 20 ECTS following the inclusion of new modules, besides adjustments in existing modules to accommodate, amongst others, the need to reinforce the communication skills of the Master students and educate on state-of-the-art technologies used for diagnostics and training in the laboratory and field.

All modules in the MSES programme are blended with practical application, that allow students to work with state-of-the-art technology in sport and exercise science.

While the goals of the modules were described in detail, the panel would have liked more clarity on the assessment of workload linked to the size and implementation of the modules. Many modules require a lot of readings by the students, and for some modules a high amount

of self-study is accounted for in the workload. To the panel, the combination of contact hours and self-study, and the link to the calculated workload is, overall, not sufficiently justified.

From what the panel heard, there is room for more challenging assignments, pushing students to make full use of self-study time to deepen and broaden their knowledge and skills. Also, the module handbook remains imprecise on what is expected of students (and staff) regarding self-study, nor is it clear what self-study methods are implemented.

The panel therefor urges the programme leader to provide guidance in terms of workload and challenges to be taken-up during self-study, so that students can make the most of their individual learning moments.

On the other hand, the panel is positive about the extracurricular activities offered in the MSES programme; it understood that these learning activities – often workshops - are mostly linked to ongoing research projects in LUNEX, in which students of the MSES can engage and contribute.

On behalf of the international expert panel charged with the institutional assessment of LUNEX International University of Health, Exercise & Sports in Differdange, Luxembourg, and the assessment of the programmes Bachelor in Osteopathy, Master in Physiotherapy, Master in Sport and Exercise Science.

Fiona Crozier
(chair)

Anja Detant
(secretary)

2 Introduction

2.1 Procedure

The Ministry of Research and Higher Education in Luxembourg requested NVAO to carry out an institutional assessment of the LUNEX International University of Health, Exercise & Sports S.A. (LUNEX) in Differdange (Luxembourg), as well as an assessment of three programmes LUNEX is currently delivering or planning to offer soon: the new Bachelor programme in Osteopathy, and the Master programmes in Sport and Exercise Science, and in Physiotherapy (reaccreditation of both Master programmes).

LUNEX is a private initiative, established in 2014 by the German COGNOS AG. It is part of the Germany-based *Carl Remigius Fresenius Education Group* (COGNOS International SE) and aims to provide higher education in the areas of health and fitness, therapy and preventive medicine. LUNEX was accredited in 2015 as a specialised higher education institution (SHEI) by the Ministry of Research and Higher Education in Luxembourg and currently offers several programmes that comply with the legal regulations in Luxembourg.

Given the features of this request, the NVAO convened an international panel of experts consisting of:

- Ms. Fiona Crozier, United Kingdom, chair
- Dr. Jorit Meesters, The Netherlands, member
- Dr. Inge Derom, Belgium, member
- Dr. Emiel van Trijffel, The Netherlands, member
- Mr. Geert Hendriks MSc, Switzerland, member
- Ms. Bobana Samardžija, Croatia, student member

The panel is carrying out the assessments after which the Board of NVAO will make a recommendation to the Ministry of Research and Higher Education in Luxembourg.

It is up to the Ministry to make the final decision on the accreditation of the institution and the three programmes. The frameworks for assessment comprise the amended Law of 19 June 2009 on the organisation of higher education and the criteria under article 4 of the Grand Ducal Regulation of 24 August 2016 on accreditation of institutions and programmes of higher education, as well as the Flemish standards for programme assessment.

Having studied the documentation provided by LUNEX before the visit, the panel held a preliminary online meeting on 15 November 2023. Following this discussion, the panel asked LUNEX to produce some further clarifications and to make available programme-related materials for consultation. Annex 3 lists the materials made available by LUNEX either before or during the site visit.

After an internal meeting to discuss its preliminary findings and study the additional materials, the panel spoke on 15 November (online) to representatives of the Ministry of Research and Higher Education. During this meeting, the panel discussed the position of LUNEX within the higher education landscape of Luxembourg whereby the representatives of the Ministry provided useful clarifications on the criteria for institutional and programme assessment.

The visit to the LUNEX campus in Differdange took place from 22 to 24 November 2023. The panel spoke to the management of the institution and the programmes, as well as to lecturers, administrative staff, students, alumni, and representatives of the professional field. The schedule of the visit is presented in annex 2.

Immediately after the discussions, the panel formulated its considerations and preliminary conclusions. These are based on the findings of the site visit and build on the assessment of the documents. The panel chair reported these preliminary findings to the institutional and programme management of LUNEX.

The panel ended its visit with a debriefing to the Ministry of Research and Higher Education in Luxembourg. The advisory report of the panel has been submitted to LUNEX for comments on factual errors. Following this review, a final report was prepared and submitted on behalf of the panel to NVAO, which in turn will send the report to the Ministry of Research and Higher Education in Luxembourg.

2.2 Panel report

This report provides the findings, considerations and conclusions of the panel on the institutional assessment requested, as well as on the three programmes of LUNEX that were object of this procedure for accreditation: the new Bachelor programme in Osteopathy, and the Master programmes in Physiotherapy and in Sport and Exercise Science (reaccreditation).

The report describes the institution, the programmes and their position within the higher education system of Luxembourg. The observations of the panel on the quality of the institution (LUNEX) are described according to the standards and criteria for institutional accreditation in chapter four, while chapters five to eight report on the quality of the respective programmes.

For each standard/criterion the panel describes its findings and considerations and issues a conclusion. Findings are the objective facts as found by the panel in the programme documents, in the complementary materials and during the site visit. Considerations are the panel's interpretation of these findings and their respective importance. The considerations of the panel logically lead to a concluding assessment per standard/criterion. The panel concludes each chapter with an overall judgement on the quality of the institution/programme and a table containing an overview of its assessments.

3 Description of the institution and the programme

3.1 Overview

Country	Luxembourg
Institution	LUNEX International University of Health, Exercise & Sports S.A.
Status	privately funded institution
Location	Differdange
Country	Luxembourg
Institution	LUNEX International University of Health, Exercise & Sports S.A.
Programme	Bachelor in Osteopathy
Degree	Bachelor
Location	Differdange
Study Load	120 ECTS
Country	Luxembourg
Institution	LUNEX International University of Health, Exercise & Sports S.A.
Programme	Master in Physiotherapy
Degree	Master
Location	Differdange
Study Load	120 ECTS
Country	Luxembourg
Institution	LUNEX International University of Health, Exercise & Sports S.A.
Programme	Master in Sport and Exercise Science
Degree	Master
Location	Differdange
Study Load	120 ECTS

3.2 Profile of the institution

According to the information materials, LUNEX International University of Health, Exercise and Sports was established in 2014 as a Société Anonyme (S.A., public stock company) according to Luxembourg law. It is part of the Germany-based *Carl Remigius Fresenius Education Group* (COGNOS International SE). LUNEX is a specialised higher education institution in the areas of health, fitness, sports, therapy and preventive medicine.

LUNEX is based in Differdange: it has a 30-year leasehold contract with the city of Differdange for its campus, can use the nearby sports facilities of the municipality, and is located a few kilometres from the Belval campus of the University of Luxembourg.

In its Strategic Plan 2020-2025, LUNEX sets out to be a leading international specialised higher education institution for sport and health in Europe; its mission is to deliver skilled graduates in the field of sports and health, lead innovative research that has an impact on society, provide students a good quality evidence-based educational experience, and enhance the national and international employability of its graduates. LUNEX is the only higher education institution in Luxembourg that offers academic degree programmes in Physiotherapy, and Sport and Exercise Science, Sport Management, Nutrition Fitness and Health and Corporate Health Management and Wellbeing, and wants to position itself with new, planned (Bachelor and Master) programmes as a provider of academic education in the field of Osteopathy.

Since the start of its activities, LUNEX is recognised by the Luxembourg Ministry of Research and Higher Education as a specialised higher education institution. At the time of the site visit in November 2023, LUNEX is offering 5 English-language Bachelor and 3 Master programmes, to approximately 900 students from Luxembourg, the neighbouring countries and beyond. Around 60 academic and administrative staff representing a variety of nationalities are on its payroll, who ensure the management of LUNEX and are key to implementing and supporting the education programmes.

These staff belong either to one of the administrative departments headed by the Head of Administration of LUNEX, or to one of academic departments under the leadership of the academic director. The academic departments are set up in line with the educational programme domains Physiotherapy; Sport and Exercise Science; Sport Management; Nutrition, Fitness and Health; Corporate Health Management.

3.3 Profile of the programmes

LUNEX is currently offering five Bachelor and three Master programmes, as well as one Foundation (preparatory) programme, and intends to expand its portfolio in the near future. All Bachelor and Master programmes have been accredited by the Luxembourg authorities in 2019, 2021 and 2023 respectively.

This report looks at the reaccreditation of the Master programmes in Sport and Exercise Science, and the Master in Physiotherapy. Furthermore, LUNEX submitted a request to the Ministry for the initial accreditation of a Bachelor programme in Osteopathy.

The **Bachelor programme in Osteopathy** is a new programme that LUNEX intends to offer. The curriculum amounts to 180 ECTS and has been designed to be a comprehensive programme providing the necessary knowledge, skills and attitudes to prepare future graduates to their next educational endeavour, the Master in Osteopathy and, subsequently, attaining the entry-level qualifications to practice Osteopathy in Luxembourg. With a strong emphasis on a holistic approach to the patient, evidence-based practice, and research, together with hands-on learning and practical applications, this programme intends to offer

opportunities for students to begin their academic journey towards mastering the Osteopathic principles.

The **Master programme in Physiotherapy** is a full-time programme that amounts to 120 ECTS. When the first cohort at LUNEX started the Bachelor in Physiotherapy (BPT) in April 2016, students had the expectation to register as Physiotherapists in Luxembourg upon completing the BPT. As of 2018, the legal provisions have changed, requiring a Master's degree to register as Physiotherapist. Upon completing the Master in Physiotherapy, students possess the registration requirements for practicing the regulated profession of "masseur-kinésithérapeute" (Physiotherapist) in the Grand Duchy of Luxembourg.

LUNEX' Master in Physiotherapy was originally submitted for accreditation on 19 September 2018 and granted conditional accreditation on the 11 July 2019. The first cohort of students was enrolled in the programme in October 2019. The Ministry of Research and Higher Education verified the fulfilment of the accreditation conditions on 14 October 2021, thus granting the full accreditation to the programme. The validity of the accreditation period for this study programme is until 30 September 2024.

LUNEX explained to the panel that it considers the current reaccreditation of its Master programme as an opportunity for a revision of the curriculum with regard to the graduates' competencies and to support the advancement of Physiotherapist education in line with the 2021 reviewed Physiotherapist Education Framework (WP-PEF) by the World Physiotherapy (WP).

The **Master programme Sport and Exercise Science (MSES)** is a full-time programme that amounts to 120 ECTS. It is designed to qualify students for leading positions in the field of sport and exercise science. The objective of the Master programme is to qualify students to enter the sector of sport and exercise professionals and work in leading positions in diagnostics, training and coaching based on an evidence-based theoretical and practical education. Students finishing the master in Sport and Exercise Science can further participate in the CONCOURS and enter the track to become a physical education teacher in Luxembourg. Moreover, students will be qualified to continue into a PhD programme.

4 Institutional assessment

4.1 Criterion A – Strategic Objectives

The higher education institution bases its activity on the guidelines and strategic objectives that it makes public. It publishes clear, accurate and updated information on its activities, including its academic programmes, admission requirements, achieved learning outcomes and qualifications achieved at the end of these programmes.

4.1.1 Findings

LUNEX International University of Health, Exercise and Sports was established in 2014 as a Société Anonyme (S.A., public stock company) according to Luxembourg law. Since the start of its activities, LUNEX is recognised by the Luxembourg Ministry of Research and Higher Education as a specialised higher education institution.

LUNEX focuses its education and research activities on the areas of health, fitness, sports, therapy and preventive medicine. In its Strategic Plan 2020-2025, LUNEX sets out to be a leading international specialised higher education institution for sports and health in Europe; its mission is to deliver skilled graduates in the field of sports and health, lead innovative research that has an impact on society, provide students a good quality evidence-based educational experience, and enhance the national and international employability of its graduates.

The panel learned from the application documents, the additional clarifications, and the discussions on-site, that LUNEX profiles itself as a specialised higher education institution that puts evidence-based education central in its mission and considers research as an integral part of the education programmes offered.

The panel gathered from different interviews that LUNEX has identified a niche in the higher education market. It is the only higher education institution in Luxembourg that offers academic degree programmes in Physiotherapy, and Sport and Exercise Science. Its intention to offer a new Bachelor (and Master) programme in Osteopathy fits with the ambition to provide relevant and sought-after programmes in the areas of sports and health. The panel appreciates the efforts of LUNEX to develop a strong research component within the institution, to attract qualified teaching staff with research expertise and to deliver research-informed education.

Furthermore, LUNEX offers all programmes in English and targets an audience of secondary school graduates from both Luxembourg and the neighbouring countries. It also profiles itself in the wider, EU and international market as a quality higher education institution with sports and health-related study programmes.

A considerable number of Physiotherapy students are from France and were attracted by the academic level of the programmes and the hands-on practical, professional approach of LUNEX. Several local students are top-level athletes who are facilitated by LUNEX' flexible study concept (e.g. teaching in modules or intensive weeks) to combine their professional sports career with an academic degree programme. Students indicated they want to obtain a qualification with LUNEX that allows them to take the state exam to become a physical education teacher in Luxembourg.

Since 2020, LUNEX has grown and evolved. In its development, the institution has taken on board many of the comments and recommendations that have been expressed by a former visitation panel. From the information received and the exchanges during the on-site visit, it

has become clear that LUNEX finds itself in a more mature stage of development as a specialised higher education institution.

The panel gathered from the meetings with the management that LUNEX is working on an update of its strategic plan which is significantly different from the current plan; it heard from the exchanges that LUNEX' management considers the strategic plan 2020-2025 to be obsolete and no longer adequate.

Whilst the panel has been informed during the on-site visit about the overarching strategic lines of LUNEX for its future development, including the building blocks for a new strategy, the panel has not seen a fully-fledged plan that allows it to understand the strategic choices and the considerations in line with the institution's vision and mission. How the choice for setting-up new programmes, such as the Bachelor (and Master) in Osteopathy, fits within the overall strategic objectives of LUNEX, is difficult to understand in the absence of an up-to-date strategy for the institute.

In addition, currently recognised by the authorities as a specialised higher education institution, LUNEX will need to reposition itself following announced changes in Luxembourg law and will most probably not be allowed to use the title of 'university' any longer. It will, therefore, be faced with the serious issue of rebranding.

4.1.2 Considerations

Based on the written materials and the discussions on-site, the panel considers that LUNEX has a unique position within the higher education landscape in Luxembourg. It has identified a niche in the market and has potential to further develop its programmes to serve this niche.

The panel heard from the exchanges with the management that LUNEX wants to position itself mainly on the EU market for developing academic partnerships (ERASMUS+). As regions of recruitment of students and of interaction and collaboration for internships, it is clear about its main markets, targeting Luxembourg and France. Further, LUNEX intends to expand and build on the expertise already available within the institution; that is to develop a growth scenario with new programmes in which it exploits synergies in the content of its portfolio and in staff qualifications available.

The panel appreciates the enthusiasm and the ambitions of the institution in terms of education, teaching, research, collaboration, and internationalisation and thinks highly of the fact that both enthusiasm and ambitions are shared by all staff.

However, the panel has seen that LUNEX has not yet redefined the direction in which it wants to go, nor has it analysed whether this direction is adequate, given the important contextual and legal changes ahead. The management confirmed that an updated strategy is in progress. Besides a preliminary draft of the building blocks for a new strategy, the panel has not seen a clear outline of the strategic direction that LUNEX plans to take. To the panel, the current strategic plan, which was written when LUNEX was a developing institution, is insufficient to manage the challenges of a more mature institution, and to deal with the upcoming changes in the legal framework of higher education in Luxembourg.

As long as the new strategic plan is under development, LUNEX is still operating under the previous strategic plan 2020-2025. The panel considers that the key actions arising from its goals need further thought. It is important for LUNEX to focus on the direction of the institution, including consideration of the development of new programmes such as the Bachelor in Osteopathy.

Further, in terms of risk assessment, LUNEX has not yet developed an up-to-date risk analysis and risk mitigation plan that fits with the current context of the institution (more students, more programmes, the legal context and the rebranding that will be required needed when

the use of the title 'university' will no longer be possible, and the impact of that on LUNEX' positioning, its internationalisation policy and cooperation with institutions abroad). To the panel, the risk analysis is a prerequisite to a successfully updated strategic vision that can take the institution forward and help planning, including for the management of some serious risks, such as the rebranding and the international positioning of the institute. Hence the panel sees an urgent need to develop an up-to-date risk analysis and risk mitigation plan and include that reflection to reposition LUNEX in the European and international markets that it targets, in line with its strategy for the future.

The panel therefore recommends finalising as the highest priority the new strategic plan and define the strategic goals of the institution. To reinforce the strategic plan, the panel expects LUNEX to work on SMART goals, a realistic timeline, and clearly defined responsibilities for each action line. It will also need to put in place a performance process for regular monitoring of these goals and for mitigating the main risks identified.

The panel considers the development of a risk assessment plan, along with the financial plan, as a key parts to the strategic plan. The institution needs to work on clear and regular means of assessing and mitigating the risks that it faces. This is even more important in the growth scenario of students and academic programmes that fit into the ambitions expressed by LUNEX.

The panel underlines the importance of the strategic positioning, also in relation to the need for a more focused internationalisation strategy (see also criterion G, below). The panel was told that the new international goals and Internationalisation Strategy are very different to the previous ones and that they are more sharply defined. However, the institution also needs to integrate considerations of the risk associated with not being able to use the title of 'university' in its internationalisation policy (see above). Risk identification and risk mitigation in this area are considered essential by the panel, for LUNEX to make substantiated choices about the partnerships that it needs and wants to maintain to pursue its goal of internationalisation.

Further, strategic positioning is essential in defining the needs and understanding the opportunities and risks well in advance, and in the beginning of the development phase of new programmes. A strategic approach will allow LUNEX to clearly target relations with relevant, external stakeholders. The panel sees benefit in the formalisation of the collaboration with external stakeholders to discuss the strategic direction and the achievement of strategic goals and risk mitigation.

The panel encourages LUNEX to engage with external stakeholders in advance of new programmes, to identify market needs, fully understand the challenges in the professional field, and develop well designed programmes in regular interaction with the relevant professional stakeholders in Luxembourg and beyond.

In sum, the panel sets it as a condition for LUNEX to develop the new strategic plan and associated risk assessment plan and define as the highest priority the strategic goals of the institution. The panel strongly recommends the publication of these strategic documents as part of the repositioning of the institution in the changing legal context of higher education institutions in Luxembourg.

4.1.3 Conclusion

The panel judges that LUNEX **partially meets** criterion A.

4.2 Criterion B – Origin of financial resources

The origin of the financial resources available to the institution is transparent and organized in compliance with the rules of scientific neutrality.

4.2.1 Findings

The panel has been informed about the financial resources of LUNEX in the financial report: 'Financial Results and Forecast 2022 – 2027'. It received access to the strategic vision in the presentation 'Strategic Management at LUNEX University', got insight in several external contracts between LUNEX and research or other financial partners, and discussed during the on-site visit the resources with the management.

In the exchanges on this subject, LUNEX was able to clarify its main types of income and expenses. The panel learned that the income of LUNEX is almost entirely reliant on student fees (95%). It hereby noted that clear and transparent information on tuition fees is published on the website. In addition, there is a small proportion of research funds available. The panel has seen that standardised contracts are in place for research funds; these mostly concern EU funding of research projects.

A controlling system is in place to provide accurate and timely financial reports. It is based on an internal system of cost centres, which helps the institute to match all expenditures to the appropriate source of income and to keep revenues from tuition fees and department expenditures separate from the funds they receive to carry on projects for research purposes.

In view of its expansion, the panel also discussed the investments. In 2015, LUNEX entered a 30-year leasehold contract with the city of Differdange regarding the premises of the campus. LUNEX also took a bank loan to cover the reconstruction of the building. LUNEX is currently investing again, to provide for additional capacity and rooms to be able to host more students and accommodate new programmes.

4.2.2 Considerations

The panel considers that the financial situation of LUNEX is organised adequately. The origin of financial sources is transparent and monitored regularly. There is a clear separation between the interests of shareholders and the management of the institution securing academic neutrality. Moreover, LUNEX fulfils all statutory obligations according to Luxembourg law in terms of yearly financial statements.

LUNEX is financially a well-resourced institute that has the capacity to invest in facilities and staff required for their activities. The institution has a stable financial position, as well as a sufficient financial buffer to support its expansion plans or to deal with unexpected costs. This puts LUNEX in a good position to really work on and achieve its strategic goals. The panel however remarks that, as for all higher education institutions, LUNEX must set in place clear and regular means of assessing and mitigating the potential risks that it could be facing.

The panel remarks that, so far, there is no mention of the business plan and/or revenue streams in the new strategic plan that is being developed. The integration of the resources with the strategic lines for the future is essential to the decision-making and to define how future activities will be funded (see criterion A, above).

In sum, the panel recommends including in its strategic planning clear information on the financial resources and planned investments by LUNEX, to make visible how it intends to finance its plans for additional programmes, staff and infrastructure for the near future.

4.2.3 Conclusion

The panel judges that LUNEX **meets** criterion B.

4.3 Criterion C – Regular academic programmes

The institution provides regular academic programmes as defined under article 28bis, paragraph 3 of the law.

4.3.1 Findings

LUNEX is accredited by the Ministry of Research and Higher Education since 2015. It is offering degree programmes that comply with the legal regulations. In line with these legal provisions, LUNEX is offering and intends to offer academic programmes that lead to either a Bachelor's or a Master's degree, two types of programmes that are explicitly foreseen by article 28 bis, paragraph 3 of the Law of 23 July 2018.

At the time of the site visit, LUNEX' portfolio consisted of the following programmes:

- Bachelor in Physiotherapy (180 ECTS);
- Master in Physiotherapy (120 ECTS);
- Bachelor in Sport and Exercise Science (180 ECTS);
- Master in Sport and Exercise Science (120 ECTS);
- Bachelor in International Sport Management (180 ECTS);
- Master in Sport Management and Digitalisation (120 ECTS);
- Bachelor in Nutrition, Fitness and Health (180 ECTS);
- Bachelor in Corporate Health Management and Wellbeing (180 ECTS).

LUNEX also offers a Foundation programme preparing students to meet the entry requirements of the bachelor programmes in Physiotherapy and Sports and Exercise Science in terms of English language proficiency and natural sciences (biology, physics, chemistry). This Foundation programme is not accredited and leads to a certificate. Hence it is not part of accreditation assignments.

Furthermore, LUNEX plans to offer a Bachelor (and a Master) in Osteopathy (180 (+ 120 ECTS)). Following the application for accreditation with the Ministry (28 June 2023), the assessment of the new Bachelor programme is part of the panel's assignment. The result is reported in a separate chapter of this report.

4.3.2 Considerations

The panel considers that as a specialised higher education institution, LUNEX is providing regular academic programmes leading to Bachelor's and Master's degrees.

The panel also clarified the nature of the engagement of LUNEX in several ongoing PhD projects. Those projects are realised in collaboration with PhD awarding institutions.

4.3.3 Conclusion

The panel judges that LUNEX **meets** criterion C.

4.4 Criterion D – Staff recruitment

The recruitment of staff members follows clearly defined procedures.

4.4.1 Findings

The panel gathered from the information materials that both academic and administrative staff are hired following standardised appointment procedures. The recruitment procedures are laid down in the document '*LUNEX University Personnel Recruitment Policy*'. The recruitment process is clearly visualised through flowcharts.

Although LUNEX has distinct recruitment plans for each programme, the panel understood that these are aligned with the overarching principles of the recruitment policy at institutional level.

Recruitment for professorships adds a new component to the usual procedure for recruitment of academic staff and is defined by the document '*LUNEX University Rules for the Appointment of Professorships*'. Within the framework of the strategy for the establishment and expansion of the institution, new posts are constantly to be filled.

During the on-site visit the panel received explanations on how the recruitment process is implemented, in this case in view of the new Bachelor programme in Osteopathy. Appointment criteria for academic staff are prepared during the selection process by an appointment committee, in charge of the selection process. The selected candidate is then endorsed by the LUNEX senate.

The panel also enquired about the procedure for recruitment of external staff, which is not covered by the regular recruitment procedures. Guest experts are invited on a short contract basis to lecture at LUNEX, to enable students to learn from the latest findings in their research. The main criterion for their recruitment is alignment of the learning outcomes with the qualification and experience of the external lecturer.

4.4.2 Considerations

The panel considers that staff recruitment at LUNEX is well organised. The institution has developed adequate HR policies, and the recruitment of staff aligns with the procedures laid down in the policy document.

The number of FTE of staff and their actual involvement in the academic program, apart from research, was not fully clear to the panel. The discussion with staff members confirmed that staff capacity is sufficient. The panel has not only been reassured that LUNEX has sufficient staff to run its current programmes; it is also clear that the institution has a plan to invest systematically in additional staff for the new programmes that it wants to set-up.

The panel further understood that academic staff is attributed time for both teaching and research, this to the satisfaction of the staff with whom the panel has been speaking. Further LUNEX established a rewarding policy for further professional development, that is much appreciated by the staff (see also criterion E, below).

As to the engagement of external lecturers, the panel finds that the procedure is not explicit; nor has it heard arguments why this part of recruitments is not integrated in the regular HR policy. It therefore recommends the institution to ensure that any policy for the recruitment of external staff is formalised, linked to the policy for the recruitment of staff and well understood by all staff.

4.4.3 Conclusion

The panel judges that LUNEX **meets** criterion D.

4.5 Criterion E – Qualified staff

In the Grand Duchy of Luxembourg, the institution employs staff with the necessary scientific and professional qualifications to provide training within the frame of the academic programmes offered by the institutions under the provisions of the law (art. 28ter, paragraphs 1-2).

4.5.1 Findings

According to the information materials, LUNEX is committed to facilitating learning of evidence-based and current best practice in all degree programmes. Staff teaching in Bachelor's and Master's degree programmes are educated at Master's level or above and have research experience and/or are currently research active. In terms of quality, the panel noticed in the most recent overview that several academic staff members hold a PhD, while others are PhD candidates.

Where applicable, the teaching staff in degree programmes, that are professionally regulated, such as for example the Bachelor in Osteopathy, will have specialist experience in their areas; some of them current, as they continue to work part-time in clinical practice or industry. This ensures that all staff involved draw on their own research and/or current best research evidence to inform their teaching. Students indicated that they are satisfied with the content expertise, the didactical quality, and the professional know-how of their lecturers.

The panel was informed that continuous professional development is part of the HR policy and is effectively organised. The panel gathered from the informative discussion with the chair of the Teaching and Learning Council (TLC) that it is an explicit goal of TLC to support consistent and ongoing academic staff professional development.

LUNEX is committed to provide all its staff members with opportunities for continuing education programmes ('LUNEX University HR Continuous Development Policy and Procedure'). The need for training is determined based on employee interviews. The aim is to develop the professional skill sets, and the social skills of the employees through personal development strategies. This serves not only to achieve LUNEX's strategic goals, but to secure the necessary specialist and managerial staff which binds the employees to the organisation in the long term.

Furthermore, the panel gathered from the materials and discussions on-site that for certain modules, and in case particular expertise is lacking within the team, external academic staff and professional experts (regional clinicians and experts from the industry) are invited as visiting lecturers to provide students with current academic and practical knowledge.

4.5.2 Considerations

The panel considers that the managerial, administrative, and academic staff currently on the payroll of LUNEX has the necessary expertise to organise and deliver higher education programmes at Bachelor and Master level. The panel was impressed by the quality and enthusiasm of the academic staff, as well of administrative and managerial personnel.

The panel considers that the current size of the academic and administrative staff is commensurate with the programmes delivered by the institute, and the numbers of students

it attracts. As LUNEX intends to offer a broader portfolio of programmes, and attracting more students, investments in academic staff teaching capacity will be necessary.

The on-site visit confirmed satisfaction of staff with the opportunities for professional development offered by LUNEX. This aspect of the staff recruitment policy appears to be a source of attraction for new staff to join the institution.

4.5.3 Conclusion

The panel judges that LUNEX **meets** criterion E.

4.6 Criterion F – Infrastructure

On the territory of the Grand Duchy of Luxembourg the institution has adequate infrastructure for the various academic programmes and allowing students to complete the required work to achieve the educational objectives.

4.6.1 Findings

LUNEX constructed its own campus in Differdange for which it agreed a 30-year leasehold contract with the municipality. Following reconstruction, the building opened in November 2016, featuring 2500 sqm of teaching and administration rooms, research laboratory and common areas for students.

In the meantime, a building with two more floors was added on campus to increase teaching and administration space capacity.

From an infrastructure point of view, the location in Differdange fulfils the prerequisites of a higher education institution with sports and health-related study programmes. The sports facilities that are already in place near the campus can be used for practical teaching sessions and can be included in the LUNEX infrastructure that students can use.

In view of its expansion, the accommodation of new programmes and additional students, LUNEX continues its investments in sufficient and adequate teaching infrastructure and self-study space for students. LUNEX explained its short-term plan for adding additional capacity, by constructing a new floor on top of the existing building, extending it with 500sqm.

During a visit of the building and the facilities, the panel noted that the site is attractive and that the classrooms are well equipped. Furthermore, the size and capacity of the rooms is variable, and some rooms can be enlarged or reduced depending on the purpose and the expected audience. This is even more important in programmes (e.g. Bachelor in Physiotherapy) with many students per year, while the student cohorts in other programmes are relatively modest. The practical rooms for Physiotherapy sessions are adequate in size and equipment for the number of students that currently make use of the rooms at the same time.

During the visit, the panel learned that the current capacity is adequate for now and will suffice, also in the near future, even in case of a growth-scenario of the institution in terms of student numbers and additional programmes. Given that several programmes feature block teaching with students alternating between intensive course weeks and self-study at home (see programme sections), the infrastructure can be used optimally. This finding also applies to large student cohorts who can be split in smaller groups and still be taught within the available infrastructure.

The panel was informed that the municipality has plans to build a hotel in the vicinity of LUNEX and has agreed to secure 30-40 rooms to be rented to the students. Furthermore, a real-estate project for a student hotel with approx. 120 rooms as well as a student restaurant and additional teaching, laboratory space and offices in the order of 3000-4000 sqm has been discussed in the Board of Directors and the Supervisory Board.

The panel also visited the research laboratory that offers good potential for both researchers and students. Currently, staff is using this laboratory for research on issues such as sport and the brain, musculoskeletal injury prevention and rehabilitation, sports performance analysis and training. The panel learned that the laboratory will be further equipped following additional contracts with companies and research grants.

A separate session in the programme was dedicated to a demonstration of the online systems LUNEX is using for its administration and communication with students. As LUNEX is committed to technology enhanced learning and continuing improvement, it has now implemented a new, state-of-the-art, e-learning portal (Canvas), that will extend the functionalities available to students and improve their learning experience.

The panel also received upon its request the overview of the online study materials that are available to the students. It has seen a substantial list of relevant journals and online materials that students can use and finds it positive that they also have access to the electronic books and journals held by the *Bibliothèque Nationale de Luxembourg*, and to social networking and collaborative tools.

4.6.2 Considerations

The panel considers the material facilities at LUNEX to be attractive and fit for purpose. In terms of size, the rooms are overall sufficient for the current number of students. By adopting the concept of block teaching, the facilities will suffice in the near future, even in case of a growth scenario with higher student numbers and additional programmes.

According to the panel, the research laboratory demonstrates that LUNEX is pursuing research and exposes its students directly to research-informed education. Moreover, this laboratory has good potential to familiarise students with, and interest them for, research.

Overall, there are good research facilities and there is sufficient research staff, primarily funded from the institution itself. The research lines are linked with the professional domains and integrated into the academic programmes. The research themes and lines are broad, which leaves room for new initiatives.

At the same time, the panel is convinced that more focus could offer opportunities for improvement and explicit alignment with LUNEX (future) strategy, as well as with challenges in the professional field and with societal challenges in and outside Luxembourg (healthy society, healthy lifestyle, digitalization etc)..

Aiming for more external funding could support the connections and alignment with outside knowledge and innovation agendas, inside and outside Luxembourg. Moreover, anticipating towards a different title as higher education institute, other than a 'university', there could be a great opportunity to do more applied and practical research.

Furthermore, the panel considers that the online systems LUNEX is using, constitute effective tools for administrators, staff, and students.

Finally, the panel endorses the plans of LUNEX to add additional capacity to its current building for extra classrooms, and to look for alternative solutions, if necessary, thereby benefiting from the good relations with the municipality.

4.6.3 Conclusion

The panel judges that LUNEX **meets** criterion F.

4.7 Criterion G – Collaborations

The institution regularly collaborates with other institutions on the national and international levels as well as with economic and social actors of the Grand Duchy of Luxembourg.

4.7.1 Findings

Since its establishment, LUNEX has invested in collaborations in different fields and with different bodies, both nationally and internationally. The panel has seen a '*Partnership and Collaboration table*' (annex 12) and an overview of the network of collaborations, described in the Accreditation Document. The listed networks appear to be appropriate to the focus of LUNEX. However, to the panel the information was unclear as to the differences between formal partners, one-off collaborations (e.g. Erasmus+) or contacts following the personal networks of the institute.

Based on the information material and the exchanges, the panel learned that the individual academic staff members have been instrumental in linking up LUNEX with their own professional networks, mostly of an academic nature and often connected to their previous home university. This is a strength, but also entails risks to which the institution has not yet formulated a reply (see criterion A, above).

Furthermore, there are contacts and agreements with domain-specific professional organisations, mainly in Luxembourg but also in neighbouring countries, that offer internships to students across all current programme domains (Physiotherapy, Sport and Exercise, ...).

The panel appreciated the exchanges with the professional field during the on-site visit. It showed the variety of stakeholders that LUNEX is dealing with, as well as the dedication of these organisations to LUNEX and its students.

4.7.2 Considerations

The panel acknowledges the efforts undertaken by LUNEX to establish cooperations and partnerships with a variety of academic and professional stakeholders and welcomes the research contacts that the key teaching staff brings along when joining LUNEX.

From the accreditation documents, it appears that departments are free to initiate and evaluate partnership proposals. There are selection criteria for this, but it is not fully clear how LUNEX maintains an oversight of all partnerships to ensure that, overall, there is a good fit with its strategic objectives.

To clarify its choices and objectives for collaboration, reinforce existing partnerships, and identify gaps and needs for collaboration with others, the panel advises to make the link to the institutional strategy and clarify at an institutional level how partnerships can support strategic aims (see also Criterion A, above).

The panel finds the focus on internationalization/cooperation with institutions abroad also slightly unbalanced compared to what could be done in cooperation efforts at local levels. It is convinced that more impact can be made locally in terms of demographic challenges, societal

resources, health(care), prevention, interdisciplinary working, health care innovation, as well as collaboration within the quadruple helix and from the quadruple aim.

The panel advises LUNEX to make better use of the input, experience and feedback from the organisations in Luxembourg, by structurally involving them in the quality assurance of the programme profile, contents, the learning outcomes of the internships and the overall exit qualifications. The panel also sees added value in timely and regular interactions with the professional field in the preparation phase for new programmes; this can help to understand opportunities and risks well in advance of beginning the development phase.

In sum, the panel is positive about the internationalisation and collaboration efforts of LUNEX. Yet, it is convinced that LUNEX could enhance its formal cooperation with the economic and social actors in Luxembourg. The selection of internship partners needs to be considered more strategically and in line with the institutional profiling. A more obvious strategic approach to international partners would also be beneficial.

4.7.3 Conclusion

The panel judges that LUNEX **meets** criterion G.

4.8 Criterion H – International exchange

The institution actively participates in international exchange programmes for students and teachers.

4.8.1 Findings

LUNEX positions itself as a specialised higher education institution in Luxembourg, but with an openly international dimension. Its programmes are offered in English. Its staff is highly international, and students are recruited, not only in Luxembourg and the wider region, but in Europe and across the globe (representing about 40 nationalities, according to the website).

Internship opportunities are mainly provided in Luxembourg, France, Germany and Belgium but students who can find internship opportunities worldwide, are generally encouraged to follow their interest.

The panel noticed from the discussions with students and staff that they appreciate this dynamic, international environment, which contributes to developing intercultural competencies and offers students at LUNEX a truly multicultural and multilingual educational environment.

According to the Luxembourg criteria for accreditation, all Bachelor or Master students should go abroad for a semester as part of their curriculum to avoid that they are exposed exclusively to the Luxembourg system of education before entering the labour market. The panel understood from the exchanges during the site visit that currently, all Physiotherapy students complete at least one internship period abroad.

Many Erasmus+ partnerships were mentioned in the accreditation documents. Additional information provided during the site-visit clarified the panels questions regarding the number of students and staff that have travelled internationally, given these partnerships. The panel also received more explanations on the strategic partners LUNEX is collaborating with. The selection criteria for screening potential partners and new international partnerships were clarified: quality and content of the study programmes offered, diversity of opportunities for participants, long-term mutually beneficial partnership and the potential for multi-projects and initiatives.

The panel gathered from the discussion with the management that LUNEX has obtained recognition as Erasmus+ institution, which opens possibilities to participate in inter-institutional cooperation partnerships. Such agreements allow the mobility of students for periods of study and traineeship, and the mobility of staff for training and teaching. The Erasmus+ programme enabled LUNEX also to participate in a series of projects with international partnerships, which allows for exchange of experiences and scientific knowledge.

In addition to the exchange periods done based on inter-institutional agreements, there are also international partners that can host students or personnel through individual agreements for periods of traineeship, training, or teaching.

4.8.2 Considerations

LUNEX believes that mobility is essential for development. Each department is free to seek and evaluate partnership proposals. The panel is positive about the international profile of LUNEX and sees the multi-lingual and multicultural community of staff, lecturers and students as a clear asset to the different programmes. The panel acknowledges the efforts undertaken by the institution in this regard and supports the management in its endeavours to offer students of all programmes the opportunity to study abroad as part of their curriculum.

In view of the plans of LUNEX to consolidate the culture of academic mobility, to promote and encourage the mobility of students and staff, to deepen the partnerships already made and evaluate proposals received from potential partners, the panel is convinced that LUNEX could benefit from more focus and clearly targeted partnerships for exchange of students and staff, in line with its overall strategic lines, its vision and objectives, and its research focus. This aspect would therefore be stronger and more targeted, if it is defined in line with the strategic choices for the short-, medium- and longer-term future of the institution.

4.8.3 Conclusion

The panel judges that LUNEX **meets** criterion H.

4.9 Overall conclusion

Having judged the **first criterion as 'partially met'** and the seven other criteria of the institutional assessment for LUNEX as 'met', the panel's overall judgement of the institutional assessment criteria is '**partially met**'.

LUNEX focuses its education and research activities on the areas of health, fitness, sports, therapy and preventive medicine. With its specialised programmes, offered in English, LUNEX has identified a niche in the Luxembourg higher education market. This is also obvious in the master programmes on Physiotherapy, and Sport and Exercise Science that were submitted for reaccreditation, and which attract a variety of local, regional and international students.

LUNEX intends to expand and build on the expertise already available within the institution; that is to develop a growth scenario with new programmes, such as the Bachelor in Osteopathy, in which it exploits synergies in the content of its portfolio and in staff qualifications available.

The governance of LUNEX is well organized with a clear division between stakeholders and management, which secures academic neutrality. LUNEX operates in line with the requirements of Luxembourg law in terms of financial accountability, degree programmes, recruitment policy and staff qualifications.

The panel considers that the material facilities at LUNEX are adequate, having a capacity of classrooms and facilities that are overall sufficient for both the current and forecasted

number of students. This evaluation also applies to the practical rooms for physiotherapy sessions.

The panel thinks highly of the international profile of the institution and considers the multi-lingual and multi-cultural community of staff, lecturers and students as a clear asset to the different programmes. Moreover, the panel appreciates the enthusiasm, dedication and academic standing of the LUNEX team.

The panel appreciates the ambitions of the institution to stand out and deliver excellent quality in terms of education, teaching, research, international partnerships and internationalisation.

The management confirmed that the current strategic plan is obsolete and informed the panel that an updated strategy is in progress. The current strategic plan appears to be insufficient to manage the challenges of a more mature institution and the upcoming changes in the legal framework of higher education in Luxembourg. LUNEX will most probably not be allowed to use the title of 'university' any longer and will be faced with the issue of rebranding. The panel has taken note of the work in progress but did not see an outline of the new strategy, nor an update of the risk analysis and risk mitigation plan for dealing with current and future risks that will impact the strategic direction to take (following the growth of the institution and the need for rebranding).

For the panel, it is important and urgent for LUNEX to define an up-to-date strategy to handle these challenges. Overarching strategic lines that link to the vision and mission of LUNEX can provide more focus. LUNEX should see it as its priority to redefine its strategy, translate its strategic lines in clear, key goals and actions to take, to reach the objectives and to adequately address the risks of a more mature institution and of a changing legal context. Further, in view of a growth scenario and the development of new programmes, strategic positioning is essential in defining the needs and understanding the opportunities and risks well in advance.

The panel sees benefit in the formalisation of the collaboration with external stakeholders to discuss the strategic direction and the achievement of strategic goals and risk mitigation. It recommends LUNEX to set up a formal interaction with its external stakeholders and the professional field, to collect input in a structural way and use this feedback to keep the different Bachelor and Master programmes professionally up to standard.

The panel underlines the importance of the strategic positioning, also in relation to the need for a more strategic selection of internship partners and a more focused internationalisation strategy. Risk identification and risk mitigation in this area are considered essential by the panel, for LUNEX to make substantiated choices about the partnerships that it needs and wants, to maintain and pursue its goals of collaboration and internationalisation, in line with the institutional profiling.

4.10 Overview of the assessments

Criterion		Judgement
A	The higher education institution bases its activity on the guidelines and strategic objectives that it makes public. It publishes clear, accurate and updated information on its activities, including its academic programmes, admission requirements, achieved learning outcomes and qualifications achieved at the end of these programmes.	Partially met
B	The origin of the financial resources available to the institution is transparent and organised in compliance with the rules of scientific neutrality.	Met
C	The institution provides regular academic programmes as defined under article 28bis, para 3 of the law.	Met
D	The recruitment of staff members follows clearly defined procedures.	Met
E	In the Grand Duchy of Luxembourg, the institution employs staff with the necessary scientific and professional qualifications to provide training within the frame of the academic programmes offered by the institutions under the provisions of the law (art. 28ter, para 1-2).	Met
F	On the territory of the Grand Duchy of Luxembourg the institution has adequate infrastructure for the various academic programmes and allowing students to complete the required work to achieve the educational objectives.	Met
G	The institution regularly collaborates with other institutions on the national and international levels as well as with economic and social actors of the Grand Duchy of Luxembourg.	Met
H	The institution actively participates in international exchange programmes for students and teachers.	Met
Overall judgement		Partially met

5 Programme assessment – Bachelor in Osteopathy

5.1 Standard 1 – Intended exit level

With respect to level, orientation and content, the intended exit level reflects the current requirements that have been set for the programme by the professional field and/or discipline from an international perspective

- *The academic programme has a structured curriculum, which reflects the objectives of the programme. It includes knowledge, specific skills and transversal skills.*
- *The academic programme is defined in line with the European standards and the Bologna process. It is defined in terms of ECTS credits and designed based on student centred learning and in particular in support of the student's success, active participation in the studies and the development of skills, knowledge and know-how.*
- *The academic programme is divided into modules each of which is assigned a certain number of ECTS credits. The objectives and the learning outcomes of each module are clearly defined.*

5.1.1 Findings

The Bachelor in Osteopathy has been designed to be a comprehensive programme providing the necessary knowledge, skills and attitude to prepare future graduates to their next educational endeavour, the Master in Osteopathy and, subsequently, attaining the entry-level qualifications to practice Osteopathy in Luxembourg.

The programme's ambition is to deliver a vision for the future of the Osteopathic profession and its quality standards. It has been designed following the WHO Benchmarks for Training in Osteopathy (WHO Benchmarks) that describe five main models of structure-function relationships to guide the Osteopathic practitioner's approach in the diagnostic and treatment process. The accreditation document also states that the legal framework and other European and international guidelines have been taken into account, without giving more details on how these have influenced the choices made to build the curriculum and its modules.

The accreditation document explains that Osteopathy is divided into three fields: structural, visceral, and craniosacral, that integrate one with the other and are integrated in the curriculum of the proposed Bachelor. The modules or building blocks of the programme were, according to the explanations received, set-up in line with the WHO Benchmarks for training in Osteopathy: 1) biomechanical structure-function; 2) respiratory/circulatory structure-function; 3) neurological structure-function; 4) biopsychosocial structure-function; 5) bioenergetic structure-function. The modules are to reflect a strong emphasis on a holistic approach to the patient, evidence-based practice and research, together with hands-on learning and practical applications.

The panel has studied the curriculum mapping that was presented, including programme objectives, and the intended learning outcomes in and across modules.

5.1.2 Considerations

The panel has learned from the documentation and explanations on-site that the modules of the Bachelor in Osteopathy are strongly aligned with the Bachelor in Physiotherapy. The Bachelor in Osteopathy overlaps for 54% of ECTS with the Bachelor in Physiotherapy.

The panel examined the specific profile of the new programme. The content of the modules for Osteopathy is mainly based on WHO benchmarks (2010), with a predominant focus on knowledge and skills, and a limited approach to transversal skills. As LUNEX claims to aim for a new and more critical approach to Osteopathy, the panel finds a programme exclusively (or mainly) based on the WHO benchmarks too narrow.

According to the panel, the profile of the Bachelor in Osteopathy has not been sharply defined in the curriculum presented. The panel did not receive a satisfactory explanation for the degree of overlap with Physiotherapy. Nor has the panel received a sufficient argumentation as to the points of similarity of/distinction between both programmes. In addition, the panel doubts that a curriculum with only 46% of ECTS dedicated to the field of Osteopathy is adequate to achieve all learning outcomes specific to Osteopathy.

The learning outcomes are related to the modules; but connections in the matrix presented are not always clear or complete. The panel saw that in line with the vision of LUNEX, evidence-based practice is reflected in learning outcome 5 and related to several modules (modules 2,17,21,22,23), but not to the clinical modules. The panel finds this incoherent and in contradiction with what is intended, even more since the staff pointed to the integration of evidence-based practice with clinical skills.

After asking programme leaders, staff and students, the panel saw it confirmed that the content of the modules does not contain a systematic approach or method for training skills in evidence-based practice, nor a separate assessment. The panel therefore considers the curriculum as it is constructed, and its different modules as they have been developed so-far, as not in line with the EQF level 6 requirements that entail explicit skills in evidence-based practice for the critical evaluation and solving of complex issues, or uncertain work and study contexts.

The panel also examined the coherence and logic of the programme as a whole; it tried to identify where and how the integration between the different building blocks or modules takes place. The panel concludes that overarching themes are not made visible and the internal, vertical structure of the programme is unclear.

Overall, it was very difficult for the panel to assess the full quality of the Osteopathy programme based on the accreditation material and the explanations received. The material presented so far had insufficient focus on the domain of Osteopathy.

Given the limited information available, the panel therefore considers that there is insufficient assurance that the intended exit level of the Bachelor in Osteopathy reflects the current requirements that have been set for the programme by the professional field and the discipline from an international perspective.

Following its observations and considerations, the panel recommends giving the programme structure and the content of its modules much more thought. It is not only key to define the distinctions with Physiotherapy and make clear choices for the profile of a Bachelor in Osteopathy. The panel expects that other models would be used to formulate learning outcomes that go beyond the basic Osteopathic domain (e.g. CanMEDS, Dublin descriptors) and present a mature and well-defined Bachelor programme in Osteopathy.

The panel encourages the programme management to reinforce the clinical practice component of the Bachelor programme. Also, it strongly recommends incorporating Evidence-Based Practice explicitly and visibly throughout all modules, for instance, by using the 5-step model (Ask-Acquire-Assess/Appraise-Apply-Analyse) based on PICO-questions. The programme should cover all domains of clinical epidemiology (Etiology, Diagnosis, Prognosis, Therapy) for critical appraisal, including primary and secondary studies.

Lastly, the panel is convinced that the Bachelor in Osteopathy would benefit from the use of Critically Appraised Topics for assessment.

In sum, the panel recommends the programme management to clearly identify the profile of the Bachelor that it wants to launch. A broader perspective for profiling every module specific to Osteopathy, needs further development. This profiling also needs to align with the profile of the institution. Further, the vertical structure of the programme is to be designed, following the alignment and coherence between modules, based on key themes.

5.1.3 Conclusion

The panel judges standard 1, intended exit level, **not** to be **met**.

5.2 Standard 2 – Teaching and learning environment

The teaching-learning environment enables the students to achieve the intended learning outcomes.

Reference criteria

- *The workload is appropriate and distributed in a balanced way between semesters.*
- *The relationship between theoretical and practical courses is in line with the programme objectives. Based on the objectives of the programme, internships are planned.*
- *Within the frame of the academic programme leading to the Bachelor's degree, with the exception of alternating courses, a compulsory training period with a university or a higher education institution abroad is included in the programme which is subject to the validation of studies followed outside the home institution.*
- *The admission requirements to the academic programme are clearly defined and published. The admission criteria provide validation of prior experience.*
- *The academic programme has sufficient resources in terms of teachers as well as financial and material resources to cover its specific needs and achieve its objectives. Such resources are available for the entire duration of the academic programme.*
- *Courses are provided by competent staff on the teaching and pedagogical level, capable of linking subject matters to professional practice in the relevant field and current research. Teaching is based on student centred learning, promoting active participation by the students.*
- *The proportion between permanent teachers and external speakers is adapted to the objectives of the academic programme.*
- *Continuing education programmes are provided to teachers.*
- *Adequate supervision and comprehensive information for students are provided. Students are offered tutoring or mentoring programmes.*

5.2.1 Findings

The Bachelor programme features 180 ECTS and is articulated over 3 years (60 ECTS each). The curriculum is developed around the five main models of structure-function relationships that the WHO benchmarks described to guide the Osteopathic practitioner's approach to diagnosis and treatment.

The accreditation document states that all the clinically orientated modules of the Bachelor in Osteopathy will include a practical component that varies between 33%-50%. These numbers are based on the experience in LUNEX with clinically orientated modules in other programmes, leading to the achievement of the entry level qualifications for becoming and health professional (e.g. programmes in Physiotherapy).

The panel sees that practice sessions include hands-on experience between peers and, whenever applicable, practice sessions with real and/or simulated patients. Working in groups is encouraged and an integral part of specific modules, either embedded in the form of collaborative work during practical sessions and workshops, or in the form of collaborative assignments.

In addition, students will engage in practice placements to further train their practical skills. The students enrolled in the Bachelor in Osteopathy will engage in a total of 625 practice hours during internships.

At the launch of the new Bachelor programme, modules will predominantly be delivered by internal lecturers; mostly those engaged in Physiotherapy. From the on-site visit, the panel learned that a dedicated staff member has been appointed to lead the programme, and additional new staff (up to a total of 5 FTE) will gradually be attracted with a more specific background in Osteopathy. A contribution of external lecturers to the programme is intended to support internationalization of students, bring experience with different approaches to teaching and research and provide additional options for curricular activities and job perspectives.

LUNEX has clearly communicated admission requirements for its study programs, as well as its admission procedure. Future students can apply online via the website. As the language of tuition is English, it is essential that students have adequate English language skills to be able to follow the programme successfully. Therefore, students must provide evidence of their English language skills corresponding to level B2 of the Common European Framework of Reference for Languages.

Where applicable, the panel understood that prior bachelor-level learning and professional experience will be accredited in a formalised Accreditation of Prior Learning and Experience (APLE) process. This is described and documented in '*LUNEX University Accreditation of Prior Learning and Experience Policy*'.

5.2.2 Considerations

The panel reviewed two modules of the programme in Osteopathy, that are based on the Bachelor in Physiotherapy. It also studied one new module dedicated to the domain of Osteopathy. In the latter, the panel saw one learning objective covered concerning an introduction lecture on evidence for cranio-sacral Osteopathy. The panel finds it a missed opportunity that no further skills are trained for evidence-based clinical decision-making.

The panel has understood that the new Bachelor programme follows the modular approach chosen by LUNEX, combined with a large part of the programme that is to be done as self-study. The panel finds the ratio of self-study to attendance (2:1) reasonable, if the requirements of what needs to be done during self-study time are clear, students are challenged enough, and results of self-study work are thoroughly evaluated.

A full overview of the new Bachelor programme would have been useful, this was not yet possible as most module descriptions, especially Osteopathy-specific ones, were not available at the time of the site-visit. To the panel, this shows that the institution has not yet developed a mature Bachelor programme for Osteopathy, that is ready to be launched.

The panel therefore encourages the management and programme leader to give the programme more thought and define its profile clearly and in line with the strategic objectives and vision of LUNEX.

The panel acknowledges that there is a plan for staff deployment to implement the new programme as soon as it can start. So far, staff involved in the development of the programme comes mainly from the Bachelor and Master in Physiotherapy that includes academics with a rich and diverse background including a trained osteopath with a doctorate in muscle physiology, supplemented with one external expert. Dr Johannsson (proposed programme leader of the BOST) is a trained osteopath from ULB (BSc + MSc) with a doctorate in applied biology in neurophysiology (ULB). Dr Johannsson has actively contributed to the development of the programme leveraging her experience as instructor in the PT programmes. LUNEX explained its strategy for acquiring more staff with expertise in Osteopathy. A review of the competences of the academic staff for the new programme, including supervisors of internships, was not possible as the recruitment will only be done once the programme receives accreditation.

From the information in the accreditation document and the exchanges during the site-visit, the panel has been informed that, where applicable, the teaching staff in degree programmes, that are professionally regulated, as it is the case for the Bachelor in Osteopathy, will have specialist experience in their areas; some of them current, as they continue to work part-time in clinical practice or industry. This should ensure that staff draw on their own research and/or current best research evidence to inform their teaching. The panel finds this positive.

LUNEX aim is to cover as much in-house teaching as possible to facilitate cohesion between different modules and areas of learning. In areas in which the internal academic team does not have the necessary subject expertise, the institution intends to hire visiting lecturers and/or work with regional clinicians and experts from the industry to facilitate current best practice workshops for the students.

The panel underlines that it considers it as critical for the new programme to acquire sufficient qualified staff for the Osteopathy-specific parts of modules. In addition, acquiring sufficient qualified clinicians to support students during internships is important; this to guarantee that the teaching and learning environment is beneficial for students to achieve the intended learning outcomes. The panel therefore recommends defining qualifications for supervisors of internships in line with the learning outcomes and in line with the vision of LUNEX on Osteopathy.

In the light of the further development of the new programme, the panel advises LUNEX to discuss with the professional representatives what skills they expect students to possess by the time of their internship and when graduating. This consultation could advance the development of a well-targeted new programme that corresponds to the needs on the labour market. It could also be beneficial to verify if current staff is properly qualified to teach the required skills and check the need for adequate additional teaching profiles.

5.2.3 Conclusion

The panel judges standard 2, teaching-learning environment, to be **partially met**.

5.3 Standard 3 – Exit level to be achieved

The programme has an adequate assessment, testing and examination system in place to ascertain whether the intended learning outcomes are being achieved.

Reference criteria

- The evaluation methods are defined on the basis of the educational objectives.
- The evaluation methods applied in the various modules are clearly communicated to the students.
- Diplomas and degrees issued by the higher education institution provide information on the acquired qualifications. They are accompanied by a diploma supplement describing the knowledge and skills acquired by the holder.

5.3.1 Findings

The accreditation documents lay out the details of LUNEX assessment regulations ('LUNEX University Assessment Regulations Bachelor and Master programmes'). The institution views assessment as a mechanism to measure students' knowledge, aptitudes, and attitudes in order to facilitate and shape their intellectual and professional ability and development. Feedback on assessment is considered to constitute an important source of learning that challenges students to reflect on their own progress and learning needs.

From a generic perspective, the student assessment processes appear to be well-governed by regulations, with an aim to assess achievement of learning outcomes at module level, aligned with the Luxembourg QF and with moderation built into the processes.

Modules in the Bachelor of Osteopathy will be mostly evaluated using written assessments, though for some parts oral-practical evaluation methods are scheduled. Assessments within modules are targeted towards the learning outcomes to be acquired by students and are therefore defined based on the educational objectives of the respective modules and of the programme as a whole. The module assessment is introduced by the module coordinator during the introductory lecture to each module.

An assessment of the internships is administered half-way through a practice placement to provide students with formative feedback on their performance, and again at the end of the internship as a summative assessment. Students are supported by tutors of LUNEX to help them reflect on the evaluation and develop successful plans for their learning and personal and professional development.

5.3.2 Considerations

As indicated before (see Standard 2, above), the panel reviewed two modules of the programme in Osteopathy, that are based on the Bachelor in Physiotherapy. It also studied one new module dedicated to the domain of Osteopathy. The panel remarks that in the latter module, oral-practical assessment does not contain criteria for evidence-based decision-making. The assessment criteria do not (fully) cover all learning objectives of this module.

The material presented so far showed insufficient alignment between learning objectives and assessment methods and criteria. In addition, the panel could not observe explicit systematic didactical methods for training skills in Evidence-Based Practice.

As most module descriptions, especially Osteopathy-specific ones, were not available, a full review of the programme has not been possible at the time of the site-visit. The panel could therefore not assess the evaluation methods to be applied in the various modules, and the exit levels to be achieved. Examples of assessment criteria for modules, clinical placements, and the bachelor dissertation were missing.

Given the limited information available focused on the domain of Osteopathy, the panel considers that there is insufficient assurance that the intended exit level, and the exit level to be achieved of the Bachelor in Osteopathy reflects the current requirements that have been set for the programme by the professional field and the discipline from an international perspective.

At this stage, and with the information at hand, the panel recommends to the programme leader to apply and make visible in the curriculum and its components the constructive alignment between learning objectives, assessment methods, and assessment criteria.

5.3.3 Conclusion

The panel judges standard 3, exit level to be achieved, **not to be met**.

5.4 Standard 4 – Internal quality assurance

The set-up and the organisation of the internal quality assurance are aimed at systematically improving the programme with the involvement of the relevant stakeholders.

Reference criteria

- *The higher education institution ensures to collect, analyse and use relevant information for the effective management and the continuous improvement of its academic programmes and research activities.*
- *The higher education institution has an internal and external quality assurance system that it makes public and that forms an integral part of its strategic management. The internal and external measures for the quality assurance of the institution are in compliance with the standards and guidelines for quality assurance in the European Higher Education Area (ESG).*
- *The academic programmes are regularly subject to an internal review to ensure they reflect the latest results of research and teaching in the relevant field, that they fulfil the targeted objectives and meet the continuously changing needs of students and society.*
- *Responsibilities, competencies and the decision-making process within the higher education institution are clearly and transparently defined.*
- *Teachers and students have sufficient means to make known their position and to participate in the decision-making process.*
- *The defined institution has a person or a committee dealing with issues relating to equal opportunities policy.*

5.4.1 Findings

The internal QA system is well-described in the Accreditation Document and information on LUNEX Quality Assurance is available on the website.

LUNEX has an integrated system of collecting feedback from students around academic teaching quality, based on surveys amongst students on the teaching they received in each module. Internships are also surveyed from both the student's and institution's points of view.

From the module evaluation surveys, module monitoring reports are produced. In addition, programme leaders hold face-to-face meetings with the cohort representatives twice a year, which gives students an opportunity to discuss their concerns in person.

Based on the description and the exchanges with students and staff, this system of internal quality assurance for the modules and the programme as a whole, is appropriate: a lot of work is done at module level and focuses on teaching quality. Input of students is then taken up to programme level. Students get a summary of the key points of their feedback that is considered and leads to adjustments. This can be seen as good practice.

Module monitoring reports and programme reviews are written every year. Each programme review is considered and approved at the Teaching & Learning Council (TLC) level by the members of the Council.

Students are represented in institutional bodies and councils (Senate, Teaching and Learning Council, Research Council). Moreover, student representatives have regular meetings with the Academic Director and the Head of Administration.

The role of the LUNEX Students Union in representation should be clarified, as students said that they were aware of this body mainly because it is in charge of entertainment and events, rather than from its involvement in student representation issues towards the programme and the overall institution management. The communication on student representation at programme and central level could thus be improved.

LUNEX also uses the individual (academic) networks of the staff to benchmark the quality and relevance of its programmes. In addition, the panel gathered from the discussion with representatives of the professional field that they are keen to increase the cooperation with LUNEX and provide guidance and input on a more structural basis.

The panel also learned that LUNEX is committed to providing a supportive and inclusive environment for all individuals in its organisation, independent of culture, perspectives, beliefs, and experiences. It has established a Gender Equality Plan and is currently developing a mechanism dedicated to implementing an equal opportunities policy. The panel encourages LUNEX to expand this policy further, going beyond matters of gender equality.

5.4.2 Considerations

The panel confirms that the internal quality assurance system on a programme level is well structured and clearly described. The system is driven by a strong bottom-up approach. Quality assurance is implemented at the departmental and programme level, including feedback from staff and students through module evaluations on a yearly basis. This system is to be applied for the new Bachelor programme in Osteopathy.

The panel has seen a drive to continuously improve the module quality based on the surveys, as well as on input at programme committee meetings and including additional students' and stakeholders' feedback (e.g., guest lecturers), noting common themes.

The Teaching and Learning Council (TLC) is the dedicated body for internal quality assurance. Changes supporting programme improvement are reviewed at TLC level.

However, to guarantee a consistent quality of the teaching-learning environment for all students in view of the growth of the institution, and to drive its QA system for the future, the panel underlines that LUNEX would benefit from functioning, institution-wide mechanisms. These are necessary to ensure that its processes assure the delivery of its objectives with the required quality.

The panel urges the institution to develop clearer guidelines about expectations in the collaboration with external partners; this includes making clear choices in the selection of partners for internships and setting-up stricter monitoring for the work done during internships. From the on-site visit, it appeared that there is a large variation and lack of clarity in how internships are offered and what students are expected or allowed to do to practice their skills. Also, the level of supervision can vary greatly from one institution/internship organisation to another (from regular, daily supervision to almost full autonomy in practice). Hence, it is difficult to see how progress can be monitored and it is not clear if, in all cases, the internships lead to the achievement of the intended learning outcomes.

Furthermore, the panel was informed that the financial compensation for internships is a matter that will be on the agenda, largely due to new regulations in Luxembourg that require payment for longer-term internships (beyond 4 weeks). The panel encourages LUNEX to clarify its position in this regard, taking into account that students are not necessarily ready to waive their right to be paid in the contract that LUNEX proposes them to sign, when engaging in the internship. The financial aspects related to internships should be balanced and evaluated against the possibilities for sufficient and high-quality internships in Luxembourg and abroad. To the panel, it is essential that LUNEX guarantees with its policy equal treatment for all students taking up internships, whether in Luxembourg or abroad.

In view of the deployment of the new Bachelor programme in Osteopathy and the growth scenario envisaged by LUNEX, the panel recommends broadening the scope of the internal QA system and the underlying processes. The panel encourages the institution to consider the following aspects:

- create a systematic structure for involving employers, supervisors, external stakeholders in the quality insurance cycle.
- development of a standard for what is expected in relation to internships, along with establishing an operational monitoring process; this to ensure clear alignment of student learning in the internships and adequate assessment of the intended learning outcomes by the tutors in the professional field.

- investment of time and effort with external partners and stakeholders (the professional fields) to ensure alignment of expectations and equivalence of student experience.
- consider the selection of internship partners more strategically and in line with the institutional profiling (see also Institutional assessment, criterion G, above).
- include growth of student numbers and an increasing need for sufficient and qualitative internships in the QA processes and as part of the risk assessment plan.
- formal inclusion of criteria for the recruitment of external staff in the institutional policy for recruitment of staff (see also Institutional assessment, Criterion D, above).
- ensure institutional QA processes with regards to the level of self-study for all existing and new study programmes. The self-study component of the programme requires clear monitoring and evaluation to ensure it is aligned with the attributed study load.

While the current internal quality assurance processes at the level of the modules and the programme are fit for purpose, the panel identifies the lack of institutional oversight and quality assurance processes in some of the key areas that were raised through the programmes (study hours, self-study time, internships) as a weakness. As these impact on the ability to meet the strategic goals, the panel urges LUNEX to take appropriate action at institutional level.

5.4.3 Conclusion

The panel judges standard 4, internal quality assurance, to be **partially met**.

5.5 Standard 5 – Research

The higher education institution performs, in the relevant areas, basic oriented research activities or applied research activities as defined in article 1 of the law of 3 December 2014 on the organisation of public research centres. These research activities will lead to publications in the institution's name in international scientific and peer-reviewed journals. The institution incorporates the results of its research in the education it is providing.

Reference criteria

- *The higher education institution performs, in the relevant areas, basic oriented research activities or applied research activities as defined in article 1 of the law of 3 December 2014 on the organisation of public research centres. These research activities will lead to publications in the institution's name in international scientific and peer-reviewed journals.*
- *The institution incorporates the results of its research in the education it is providing.*

5.5.1 Findings

LUNEX profiles itself as a specialised higher education institute or 'university', that is paying considerable attention to research. Academic staff performs adequate research activities that is leading to publications and is used to inform its education.

During the visit, the panel discussed on several occasions the current research activities of the team and its ambitions for the future.

Moreover, the panel was informed about the role of the Research Council (RC), which LUNEX has established to encourage and support research, to advise the institution on the research lines to take and to stimulate and maintain scientific excellence. To foster cross-departmental research activities and achieve a transdisciplinary research approach, the Research Council has defined the research fields of interest in specific areas, that allow collaborative and creative research approaches, so as to make use of the multidisciplinary expertise of academic staff.

With its research agenda, LUNEX wants to bridge knowledge gaps in for example Physiotherapy, and Sport Exercise and Sport Management, extending the research strengths to more complex social and health questions. The existence of the LUNEX Ethics Committee is positive, as this considers and advises on ethical issues in relation to research within the institution.

Overall, students are stimulated to follow and engage in research activities and research projects of staff. They are introduced to research findings and research methods by a mix of individual and group tasks in some of the modules at Bachelor and Master level. Some examples of the guidance of students towards the lines of research that are considered relevant in LUNEX were provided, such as participation of students in lab-activities, introduction to data-management, guidance to research-based experience for doing their Master thesis, or participation in science-based workshops to promote science to the public.

In addition, involvement of the community fosters research on community-relevant topics (e.g., fall prevention and innovative rehabilitation approaches) as part of the research activities undertaken by Physiotherapy and Sport and Exercise Science students, while conducting their Master thesis.

For the new programme Bachelor in Osteopathy, it is the intention to integrate the same approach. This entails recruiting additional staff with relevant academic and research competencies in the field, to enrich teaching material with relevant research approaches and findings, and to liaise with the community to introduce relevant research topics to the students.

5.5.2 Considerations

The panel is positive about the attention LUNEX is paying to research and the way it is integrating this research into the education of its students. The research line in LUNEX is active and follows current standards in Europe.

Following its exchanges, the panel could see that there is a link between the programmes on offer and the research domains covered by the academic staff. The research performed by the academic staff finds its way directly to some of the modules.

The investments of a young institution such as LUNEX for building a research partner network are highly appreciated by the panel. The panel remarks that in the light of the great ambition to become a leading specialised higher education institution for sport and health in Europe, LUNEX may require a strategic partnership with one or two established, strong partners. Such strategic partnerships can function as a benchmark and reference point to further develop and position itself in the relevant research fields.

For the Bachelor of Osteopathy, the panel recommends using the opportunities present and sign agreements with established research partners in the field, for instance, ULB.

5.5.3 Conclusion

The panel judges standard 5, research, to be **met**.

5.6 Overall conclusion

The overall judgment of the panel for the accreditation standards for the new programme of **Bachelor in Osteopathy** is '**not met**'. The panel assessed **standards one and three** as '**not met**', while **standards two and four** received a '**partially met**'.

From the information provided, the panel gathered that the set-up of the new programme and the content of the modules of the Bachelor in Osteopathy are strongly aligned with the Bachelor in Physiotherapy (54% overlap). The content of the modules for Osteopathy is mainly based on WHO benchmarks, with a predominant focus on knowledge and skills, and a limited approach to transversal skills.

As LUNEX claims to aim for a new and more critical approach to Osteopathy, the panel finds a programme exclusively (or mainly) based on the WHO benchmarks too narrow. It also doubts that a curriculum with only 40% ECTS dedicated to the field of Osteopathy is adequate to achieve all learning outcomes specific to Osteopathy.

Based on the accreditation material and the explanations received, the panel considers the curriculum as it is built so far, and its different modules as they have been developed, not to be in line with the EQF level 6 requirements that entail explicit skills in evidence-based practice for the critical evaluation and solving of complex issues, or uncertain work and study contexts.

Given the premature stage of the new programme, it was not possible for the panel to assess the full quality of the new Bachelor. The material presented showed insufficient alignment between learning objectives and assessment methods and criteria. In addition, the panel could not observe explicit systematic didactical methods for training skills in Evidence-Based Practice.

Due to the limited information available with a focus on the domain of Osteopathy, the panel considers that there is insufficient assurance that the intended exit level, and the exit level to be achieved of the Bachelor in Osteopathy reflects the current requirements that have been set for the programme by the professional field and the discipline from an international perspective.

5.7 Overview of assessments

Standard		Judgement
1	Intended exit level	Not met
2	Teaching-learning environment	Partially met
3	Exit level to be achieved	Not met
4	Internal quality assurance	Partially met
5	Research	Met
Overall judgement		Not met

6 Programme assessment – Master in Physiotherapy

6.1 Standard 1 – Intended exit level

With respect to level, orientation and content, the intended exit level reflects the current requirements that have been set for the programme by the professional field and/or discipline from an international perspective

Reference criteria

- The academic programme has a structured curriculum, which reflects the objectives of the programme. It includes knowledge, specific skills and transversal skills.
- The academic programme is defined in line with the European standards and the Bologna process. It is defined in terms of ECTS credits and designed based on student centred learning and in particular in support of the student's success, active participation in the studies and the development of skills, knowledge and know-how.
- The academic programme is divided into modules each of which is assigned a certain number of ECTS credits. The objectives and the learning outcomes of each module are clearly defined.

6.1.1 Findings

As part of its healthcare-oriented programmes LUNEX offers a Bachelor and a Master in Physiotherapy. Upon completing the two study programmes in Physiotherapy, LUNEX graduates, possess the registration requirements for practicing the regulated profession of "masseur-kinésithérapeute" (Physiotherapist) in the Grand Duchy of Luxembourg.

LUNEX considers the current reaccreditation of the Master programme as an opportunity for a revision of the curriculum in light of the graduates' competencies and the potential changes in the scientific, socio-economic and cultural context; in addition the review process of the Master in Physiotherapy benefitted from the guidance provided by the World Physiotherapy (WP) recently reviewed and released Physiotherapist Education Framework (WP-PEF) (2021), to support the advancement of Physiotherapist education.

The programme objectives in terms of professional qualifications are twofold: on the one hand to enable the graduates to meet entry level professional standards to practise in Luxembourg, and on the other hand to elevate the graduates' competencies in the neuro-musculoskeletal domain to a level of specialism, that is meeting the standards for education set by the International Federation of Manipulative Therapists (IFOMPT). Hence, the Master programme includes a speciality stream on manual therapy and neuro-musculoskeletal Physiotherapy.

The panel has seen a curriculum map that gives a holistic view of the degree to which each intended learning outcome will be taught and assessed in the Master in Physiotherapy. The panel gathered that the intended learning outcomes of the Master programme follow two streams: general programme learning outcomes (GPLO) achievement across modules; and specialised programme learning outcomes (SPLO) achievement across modules.

The curriculum review accounted for change to 50 ECTS. This was explained to the panel as a means of ensuring that the curriculum is up-to-date, relevant, and reflective of the evolving needs of the profession, the consumer, and the systems (e.g., health and education system).

6.1.2 Considerations

The outline of the new programme is included in the Module Handbook that the panel received; it clearly describes intended learning outcomes connected to global descriptions of content, methods of teaching and learning and assessment method. Modules are linked to the intended exit level, using established professional frameworks. This is positive.

However, the handbook needs clarification in terms of how direct training is provided (it is unclear how much of each modality is included in the programme) and what is expected of students regarding self-study (see also Standard 2, below).

Also, it strikes the panel that in the overview provided, there is little explicit attention for themes like prevention, health behaviour, changing society/ societal challenges, qualitative research, health(care)innovation. The panel heard during the on-site visit that 21st century skills and themes, like innovation and public health, are integrated parts in every module.

The quality of the academic program, including all new modules, could not be assessed by the panel beyond the level of the module handbook. LUNEX could not provide elaborated documents describing the new modules, as these are not yet ready. Instead, modules from the current programme were delivered. As the panel learned that the changes in the programme modules account almost half of the Master programme credits, it found it insufficient to see the current (old) modules, for assessing the new, revamped programme that is submitted under the reaccreditation procedure.

Given the lack of up-to-date information about the new curriculum, it was also difficult to evaluate the horizontal and vertical integration in and between modules. From the exchanges on-site, the panel grasped that integration is to be ensured through the input of internal and external staff in the programme, that allows to see and discuss a given therapy from different angles. A clearer view on the new building blocks of the curriculum, would have been useful to be reassured that coherence and integration is reached within and across modules, and leads to all the expected learning outcomes.

In sum, the panel has seen an outline of the new programme in the module handbook. The intended exit level in the module handbook appeared to meet the expectations of a Master's programme in Physiotherapy. However, the panel lacked the underlying descriptions for the new modules, to understand the nature of the changes and be able to confirm that the revamped curriculum is well-balanced and structured. Based on the information available, the panel cannot judge whether the new curriculum enables students to achieve all the intended learning outcomes and guarantees that Master students meet, upon graduation, the requirements for the regulated profession of Physiotherapist in Luxembourg.

Due to a lack of documentation for the new programme, the quality of the new programme on this standard could thus not be assessed.

6.1.3 Conclusion

The panel judges standard 1, intended exit level, **not to be met**.

6.2 Standard 2 – Teaching and learning environment

The teaching-learning environment enables the students to achieve the intended learning outcomes.

Reference criteria

- *The workload is appropriate and distributed in a balanced way between semesters.*
- *The relationship between theoretical and practical courses is in line with the programme objectives. Based on the objectives of the programme, internships are planned.*
- *Within the frame of the academic programme leading to the Bachelor's degree, with the exception of alternating courses, a compulsory training period with a university or a higher education institution abroad is included in the programme which is subject to the validation of studies followed outside the home institution.*
- *The admission requirements to the academic programme are clearly defined and published. The admission criteria provide validation of prior experience.*
- *The academic programme has sufficient resources in terms of teachers as well as financial and material resources to cover its specific needs and achieve its objectives. Such resources are available for the entire duration of the academic programme.*
- *Courses are provided by competent staff on the teaching and pedagogical level, capable of linking subject matters to professional practice in the relevant field and current research. Teaching is based on student centred learning, promoting active participation by the students.*
- *The proportion between permanent teachers and external speakers is adapted to the objectives of the academic programme.*
- *Continuing education programmes are provided to teachers.*
- *Adequate supervision and comprehensive information for students are provided. Students are offered tutoring or mentoring programmes.*

6.2.1 Findings

The Master in Physiotherapy is designed to be a comprehensive programme providing Bachelor's graduates with an additional layer of knowledge, skills and attitudes that are necessary to attain the entry-level qualifications to practice Physiotherapy in Luxembourg.

The study programme proposed in the re-accreditation document is a Master's programme with 450 hours (18 ECTS) of supervised professional practice. In combination with a Bachelor's degree in Physiotherapy, the Master's programme aims at providing the students with a minimum of 1125 hours (45 ECTS) of supervised professional practice. This is a legal requirement of the Luxembourg law (2018) to access the profession of 'masseur-kinésithérapeute'.

Moreover, the programme provides advanced training in the assessment and management of neuro-musculoskeletal disorders and aims to prepare graduates for a successful career as OMPT specialists (Orthopaedic Manipulative Physical Therapy).

The revamped Master programme has been presented as a programme with a strong emphasis on clinical reasoning, evidence-based practice, and rehabilitation research, together with hands-on learning and practical applications.

Particular attention was paid to the workload, but also to the entry level competency standards defined at the international level by the World Physiotherapy, as well the standards set by the government bodies of Luxembourg.

6.2.2 Considerations

The panel has analysed the teaching and learning environment of the Master programme and is positive about its findings.

The panel has been able to talk to the academic and administrative staff of the Master in Physiotherapy and confirms that staff is very motivated, enthusiastic, and experienced to provide for the courses and deliver the support services in the curriculum. Staff is well-supported by LUNEX in terms of on-boarding, development, continuous education, and resources to do their work.

Staff-student-ratios in the Master programme are adequate, and from the exchanges it had during the on-site visit, the panel gathered that student support is good. Students confirmed that academic staff is easy to approach and willing to support the students.

The panel confirms that the facilities are sufficient for providing teaching, including self-practice and self-study for the students in the Master of Physiotherapy.

Practical application of knowledge, skills and competencies is paramount in the Physiotherapy profession. Accordingly, all the clinically orientated modules of the Master in Physiotherapy include a practical component that varies between 33%-50%. Practice sessions include hands-on experience between peers and, whenever applicable, practice sessions with real and/or simulated patients. Working in groups is encouraged and an integral part of specific modules sometimes embedded in the form of collaborative work during practical sessions and workshops and other times in the form of collaborative assignments.

The self-study component in the programme is considerable: per 8 hours of contact, students are expected to commit to 17 hours of independent self-study. However, it remains unclear to the panel how it is monitored and assessed that students benefit from the amount of self-study to reach the intended learning outcomes.

The internship is a critical component of the curriculum. It provides students with the opportunity to apply the theoretical knowledge and practical skills learned on campus to real-life situations. The panel learned from the on-site visit that the network of internship places at LUNEX for Physiotherapy students is large and international (Luxembourg, wider region, EU and beyond), and provides a range of options available for students to choose from, covering a variety of specializations, populations, and healthcare settings.

Students have the opportunity to experience internships in different fields of Physiotherapy, ranging from musculoskeletal, neurological, cardiorespiratory, paediatrics, to geriatrics. They have access to internships in different healthcare settings such as hospitals, rehabilitation centres, community health centres, private practices.

From the exchanges with the professional stakeholders, the panel heard ideas and suggestions emerge about how to ensure that students are exposed to a diverse range of patients, conditions, and settings, which is crucial for their development as competent and well-rounded Physiotherapists. A regular and more formal involvement of the professional stakeholders in the Master programme at LUNEX is therefore to be recommended (see also Standard 4, below).

Based on the (partial) material presented to the panel, the panel has seen the teaching and learning formats defined in the module handbook (and partially shown in presentations) and the digital support for students and teaching staff that are in place. The overall workload includes teaching hours in lectures and practical classes, clinical placements, as well as hours dedicated to autonomous study. From the module handbook, workload distribution in the programme appears to be in order. However, this could not be validated by the panel, since the module descriptions for the new parts of the programme were not available before, nor during the visit.

The panel investigated the module descriptions that were provided in the module handbook. While the goals of the modules were described in detail, it was not always clear how the implementation of the module as a combination of contact hours and self-study could be linked to the study load, associated with the size of the module. Furthermore, some students indicated that in a few cases, course contents did not exhaust the study load envisaged. In these cases, they could be more challenged through additional materials that both broadens and deepens the subject. The panel advises the programme in general, and specifically the module coordinators, to ensure that the module contents are sufficiently challenging and require students to effectively handle the workload that is associated with each module.

6.2.3 Conclusion

The panel judges standard 2, teaching-learning environment, to be **partially met**.

6.3 Standard 3 – Exit level to be achieved

The programme has an adequate assessment, testing and examination system in place to ascertain whether the intended learning outcomes are being achieved.

Reference criteria

- *The evaluation methods are defined on the basis of the educational objectives.*
- *The evaluation methods applied in the various modules are clearly communicated to the students.*
- *Diplomas and degrees issued by the higher education institution provide information on the acquired qualifications. They are accompanied by a diploma supplement describing the knowledge and skills acquired by the holder.*

6.3.1 Findings

The outline of the new programme was included in the module handbook. Beyond the module handbook, the panel could not see up-to-date information on the new courses of the Master programme in Physiotherapy, including assessment and examinations.

Following the request of the Ministry of Research and Higher Education, the panel investigated the provisions for accreditation of prior learning and found these to be adequately covered in the Assessment Regulations. Furthermore, the panel was informed that the Examination Office receives only a limited number of applications for equivalence.

6.3.2 Considerations

The quality of the revamped Master programme, including assessments and examinations, could not be studied beyond the level of the module handbook. LUNEX explained that the development of new modules for the master in Physiotherapy is ongoing and therefore, it could not provide elaborated documents describing these new modules. Instead, modules from the current programme were delivered to the panel. Given the substantial number of changes in the programme (50 ECTS), the panel finds this insufficient for assessing the standard on 'exit level to be achieved' for the revamped Master programme.

In addition, the panel gathered from the exchanges with students and the professional field that there is a large diversity in the internship assignments that students can take-up; there are important variations regarding the amount and level of supervision during the internships, the gradual reduction of supervision during the course of the entire (BA and MA) program, the assessment of the internship as building up towards independent health professionals.

The absence of a clearly set and agreed standard in terms of entry level, quality monitoring and quality improvement for the internships provided, creates uncertainty for students. The lack of assurance of the quality of the work field partners, and the absence of a clear structure or formalized expectations for the internships, do not allow the panel to conclude that - in all cases - internships are leading students to equal learning experiences that serve the intended exit level of a starting, independent Physiotherapist.

Since a well-prepared and committed work field providing internships is a prerequisite for the exit level of the LUNEX students, the panel strongly recommends setting up a formal body with representatives of the work field for Physiotherapy, to discuss, improve, learn, and formalize issues regarding the structure, process, and outcome of the internships of students from the Physiotherapy programme (see also Standard 4, below).

Regular exchanges and formal interactions with the work field could also allow the establishment of a formalized, long-term vision regarding the structure, process/methodology and outcomes for internships of LUNEX' students in Luxembourg and abroad. Last, such an initiative could be helpful in defining a uniform and clear policy from LUNEX regarding payment of students during their internships in Luxembourg.

6.3.3 Conclusion

The panel judges standard 3, exit level to be achieved, **not to be met**.

6.4 Standard 4 – Internal quality assurance

The set-up and the organisation of the internal quality assurance are aimed at systematically improving the programme with the involvement of the relevant stakeholders.

Reference criteria

- *The higher education institution ensures to collect, analyse and use relevant information for the effective management and the continuous improvement of its academic programmes and research activities.*
- *The higher education institution has an internal and external quality assurance system that it makes public and that forms an integral part of its strategic management. The internal and external measures for the quality assurance of the institution are in compliance with the standards and guidelines for quality assurance in the European Higher Education Area (ESG).*
- *The academic programmes are regularly subject to an internal review to ensure they reflect the latest results of research and teaching in the relevant field, that they fulfil the targeted objectives and meet the continuously changing needs of students and society.*
- *Responsibilities, competencies and the decision-making process within the higher education institution are clearly and transparently defined.*
- *Teachers and students have sufficient means to make known their position and to participate in the decision-making process.*
- *The defined institution has a person or a committee dealing with issues relating to equal opportunities policy.*

6.4.1 Findings

The internal QA system is well-described in the Accreditation Document and information on LUNEX Quality Assurance is available on the website.

LUNEX has an integrated system of collecting feedback from students around academic teaching quality, based on surveys amongst students on the teaching they received in each module. Internships are also surveyed from both the student's and institution's points of view.

From the module evaluation surveys, module monitoring reports are produced. In addition, programme leaders hold face-to-face meetings with the cohort representatives twice a year, which gives students an opportunity to discuss their concerns in person. Module monitoring reports and programme reviews are written every year. Each programme review is considered and approved at the Teaching & Learning Council (TLC) level by the members of the Council. The panel learned that the Teaching and Learning Council (TLC) is the dedicated body for internal quality assurance. All changes supporting programme improvement are reviewed at this level.

In the current QA system, a lot of work is done at module level and focuses on teaching quality. Input of students is then taken up to programme level. Students get a summary of the key points of their feedback that is considered and leads to adjustments. This can be seen as good practice.

Students are represented in institutional bodies and councils (Senate, Teaching and Learning Council, Research Council). Moreover, student representatives have regular meetings with the Academic Director and the Head of Administration.

Though the representation of students is guaranteed, and the decision-making process is clear to staff and students, the panel notes that there is limited active involvement of students in the councils and other institutional bodies.

LUNEX is also using the individual (academic) networks of the staff to benchmark the quality and relevance of its programmes. The panel gathered from the discussion with representatives of the professional field that they are keen to increase the cooperation with LUNEX and provide guidance and input on a more structural basis.

The panel learned that LUNEX is committed to providing a supportive and inclusive environment for all individuals in its organisation, independent of culture, perspectives, beliefs, and experiences. It has established a Gender Equality Plan and is currently developing a mechanism dedicated to implementing an equal opportunities policy. The panel encourages LUNEX to expand this policy further, going beyond matters of gender equality.

6.4.2 Considerations

The panel confirms that the internal quality assurance system on a programme level is well structured and clearly described. The system is driven by a strong bottom-up approach. Quality assurance is implemented at the departmental and programme level, including feedback from staff and students through module evaluations on a yearly basis.

In terms of QA at programme and course level, students are invited to evaluate each module. They emphasised that their comments are heard by the individual module coordinator and the programme management. Furthermore, students appreciate the small-scale character of the programme, which allows for much interaction between students and staff. Students mentioned that staff manages to create a positive atmosphere and a safe environment, in which students feel at ease to bring forward issues of concern.

The panel has seen a drive to continuously improve the module quality based on the surveys, as well as on input at programme committee meetings and including additional students' and stakeholders' feedback (e.g., guest lecturers), noting common themes.

Moreover, the staff in the Master of Physiotherapy has many individual contacts with the professional field, notably through its internship network and the clinical educators of the respective internship providers. The panel gathered from the discussion with representatives of the professional field that they are keen to increase the cooperation with LUNEX and provide guidance and input on a more structural basis. Hence the panel's suggestion to establish a formal relationship with the professional stakeholders in the field of Physiotherapy.

Hereby, the panel sees opportunities to develop clearer guidelines about expectations in the collaboration with external partners, and set-up stricter monitoring for the work done by students during internships.

From the on-site visit, it appeared that there is a large variation and lack of clarity in how internships are offered and what students are expected or allowed to do to practice their skills. Also, the level of supervision can vary greatly from one institution to another (from regular, daily supervision to almost full autonomy in practice). Hence, it is difficult to see how progress can be monitored and it is not clear if, in all cases, the internships lead to the achievement of the intended learning outcomes.

Furthermore, the panel was informed that the financial compensation for internships is a matter that will appear on the agenda, largely due to new regulations in Luxembourg that require payment for longer-term internships (beyond 4 weeks). The panel encourages LUNEX to clarify its position in this regard, taking into account that students are not necessarily ready to waive their right to be paid in the contract that LUNEX proposes them to sign when engaging in the internship. The financial aspects related to internships should be balanced and evaluated against the possibilities for sufficient and high-quality internships in Luxembourg and abroad. To the panel, it is essential that LUNEX guarantees with its policy equal treatment for all students taking up internships, whether in Luxembourg or abroad.

In view of the growth scenario envisaged by LUNEX, the panel recommends broadening the scope of the internal QA system and the underlying processes. To drive its QA system for the future, the panel underlines that LUNEX would benefit from performant, institution-wide mechanisms to keep track of where it wants to go and whether its processes allow to deliver its objectives with the required quality.

The panel encourages the institution to consider the following aspects:

- create a systematic structure for involving employers, supervisors, external stakeholders in the quality insurance cycle.
- development of a standard for what is expected in relation to internships, along with establishing an operational monitoring process; this to ensure clear alignment of student learning in the internships and adequate assessment of the intended learning outcomes by the tutors in the professional field.
- investment of time and effort with external partners and stakeholders (the professional fields) to ensure alignment of expectations and equivalence of student experience.
- consider the selection of internship partners more strategically and in line with the institutional profiling (see also Institutional assessment, criterion G, above).
- include growth of student numbers and an increasing need for sufficient and qualitative internships in the QA processes and as part of the risk assessment plan.
- formal inclusion of criteria for the recruitment of external staff in the institutional policy for recruitment of staff (see also Institutional assessment, Criterion D, above).
- ensure institutional QA processes with regards to the level of self-study for all existing and new study programmes. The self-study component of the programme requires clear monitoring and evaluation to ensure it is aligned with the attributed study load.

While the current internal quality assurance processes at the level of the modules and the programme are fit for purpose, the panel identifies the lack of institutional oversight and quality assurance processes in some of the key areas that were raised through the programmes (study hours, self-study time, internships) as a weakness. As these impact on the ability to meet the strategic goals, the panel urges LUNEX to take appropriate action at institutional level.

6.4.3 Conclusion

The panel judges standard 4, internal quality assurance, to be **partially met**.

6.5 Standard 5 – Research

The higher education institution performs, in the relevant areas, basic oriented research activities or applied research activities as defined in article 1 of the law of 3 December 2014 on the organisation of public research centres. These research activities will lead to publications in the institution's name in international scientific and peer-reviewed journals. The institution incorporates the results of its research in the education it is providing.

Reference criteria

- *The higher education institution performs, in the relevant areas, basic oriented research activities or applied research activities as defined in article 1 of the law of 3 December 2014 on the organisation of public research centres. These research activities will lead to publications in the institution's name in international scientific and peer-reviewed journals.*
- *The institution incorporates the results of its research in the education it is providing.*

6.5.1 Findings

LUNEX profiles itself as a specialised higher education institute or 'university', that is paying considerable attention to research. During the visit, the panel discussed on several occasions the current research activities of the team and its ambitions for the future.

Moreover, the panel was informed about the role of the Research Council (RC), which LUNEX has established to encourage and support research, to advise the institution on the research lines to take and to stimulate and maintain scientific excellence. To foster cross-departmental research activities and achieve a transdisciplinary research approach, the Research Council

has defined the research fields of interest in specific areas, that allow collaborative and creative research approaches, so as to make use of the multidisciplinary expertise of academic staff.

With its research agenda LUNEX wants to bridge knowledge gaps in for example Physiotherapy, and Sport Exercise and Sport Management, extending the research strengths to more complex social and health questions. The existence of the LUNEX Ethics Committee is positive, as this considers and advises on ethical issues in relation to research within the Institution.

The research performed by the academic staff in the Master in Physiotherapy finds its way directly to some of the modules. Overall, students are stimulated to follow and engage in research activities and research projects of staff. They are introduced to research findings and research methods by a mix of individual and group tasks in some of the modules at Bachelor and Master level. Some examples of the guidance of students towards the lines of research that are considered relevant in LUNEX were provided, such as participation of students in lab-activities, introduction to data-management, guidance to research-based experience for doing their Master thesis, or participation in science-based workshops to promote science to the public.

In addition, involvement of the community fosters research on community-relevant topics (e.g., fall prevention and innovative rehabilitation approaches) as part of the research activities undertaken by Physiotherapy and Sport and Exercise Science students, while conducting their Master thesis.

6.5.2 Considerations

Overall, the panel confirms that there are good research facilities available at LUNEX, and there is sufficient research staff, primarily funded from the institution itself. For the Master in Physiotherapy, the research line in LUNEX is active and follows current standards in Europe. Academic staff performs adequate research activities that is leading to publications and is used to inform its education.

The panel is positive about the way LUNEX is integrating research into the academic programme of the Master in Physiotherapy. Research is important for underpinning Physiotherapy treatment and for pushing forward the domain to contribute to societal challenges.

The panel finds the research themes and lines it has seen broad, which leaves room for new initiatives. At the same time, however, more focus in research lines chosen, could offer opportunities for improvement of the research output.

The panel is of the opinion that research in the Physiotherapy Masters' programme could improve, not only from a more explicit alignment with LUNEX (future) strategy, but also from clear engagement in relation to the challenges in the professional field, as well as the societal challenges in and outside Luxembourg.

The investments of a young institution such as LUNEX for building a research partner network are highly appreciated by the panel. The panel remarks that in the light of the great ambition to become a leading specialised higher education institution for sport and health in Europe, LUNEX may require a strategic partnership with one or two established, strong partners. Such strategic partnerships can function as a benchmark and reference point to further develop and position itself in the relevant research field. Also, aiming for more external funding could support the connections and alignment with the outside knowledge and innovation agendas, both inside and outside Luxembourg.

6.5.3 Conclusion

The panel judges standard 5, research, to be **met**.

6.6 Overall conclusion

The overall judgment of the panel for the accreditation standards of the Master programme in Physiotherapy is **'not met'**. The panel assessed **standards one and three** as **'not met'**, while **standards two and four** received a **'partially met'**.

The panel learned from the exchanges that LUNEX considered the reaccreditation of the Master programme as an opportunity for a revision of the curriculum. The revamped Master programme has been presented as a programme with a strong emphasis on clinical reasoning, evidence-based practice, and rehabilitation research, together with hands-on learning and practical applications.

The quality of the academic program, including all new modules accounting for 50 ECTS, could however not be assessed by the panel beyond the level of the module handbook. LUNEX could not provide elaborated documents describing the new modules, as these are not yet ready. Instead, modules from the old programme were delivered. As the panel learned that the changes in the programme modules account almost half of the Master programme credits, it found it insufficient to see the current (old) modules, for assessing the new, revamped programme that is submitted under the reaccreditation procedure.

Given the lack of up-to-date information about the new curriculum, it was also difficult to evaluate the horizontal and vertical integration in and between modules. A clearer view on the new building blocks of the curriculum, would have been useful to be reassured that coherence and integration is reached within and across modules, and leads to all the expected learning outcomes.

Regarding the estimated workload of the Master programme, in particular the ECTS attributed to the self-study time that constitutes a considerable part in the programme, it remains unclear to the panel how it is monitored and assessed that the self-study time is actually needed, and students benefit from the amount of self-study to reach the intended learning outcomes.

The great variety in internships that students of the Master in Physiotherapy can take-up, and the absence of a clearly set and agreed standard in terms of entry level, quality monitoring and quality improvement for the internships provided, creates uncertainty for students. The lack of assurance of the quality of the work field partners, and the absence of a clear structure or formalized expectations for the internships, do not allow the panel to conclude that - in all cases - internships are leading students to equal learning experiences that serve the intended exit level of a starting, independent Physiotherapist.

The panel strongly recommends setting up a formal body with representatives of the work field for Physiotherapy, to discuss, improve, learn, and formalize issues regarding the structure, process, and outcome of the internships of students from the Physiotherapy programme.

6.7 Overview of assessments

Standard		Judgement
1	Intended exit level	Not met
2	Teaching-learning environment	Partially met
3	Exit level to be achieved	Not met
4	Internal quality assurance	Partially met
5	Research	Met
Overall judgement		Not met

7 Programme assessment – Master in sport and Exercise Science

7.1 Standard 1 – Intended exit level

With respect to level, orientation and content, the intended exit level reflects the current requirements that have been set for the programme by the professional field and/or discipline from an international perspective

Reference criteria

- The academic programme has a structured curriculum, which reflects the objectives of the programme. It includes knowledge, specific skills and transversal skills.
- The academic programme is defined in line with the European standards and the Bologna process. It is defined in terms of ECTS credits and designed based on student centred learning and in particular in support of the student's success, active participation in the studies and the development of skills, knowledge and know-how.
- The academic programme is divided into modules each of which is assigned a certain number of ECTS credits. The objectives and the learning outcomes of each module are clearly defined.

7.1.1 Findings

The Master in Sport and Exercise Science (MSES) contains 13 modules covering 120 ECTS. The programme is designed to qualify students for leading positions in the field of sport and exercise science. The Accreditation document indicates that the programme allows students to enter the dynamic and rapidly growing market of sport and exercise professionals where sport for performance and sport for health are two of the driving factors.

The objective is to prepare students to work in leading positions in diagnostics, training and coaching based on an evidence-based theoretical and practical education. Students finishing the Master in Sport and Exercise Science can further participate in the CONCOURS and enter the track to become a physical education teacher in Luxembourg.

Based on the requirements according to the European Qualification Framework (EQF), as well as the Luxembourgish qualification framework to the European qualifications (CQL) of level 7, the programme develops highly specialized knowledge in sport science, as well as specific problem-solving and practical skills related to the field of sport and exercise science.

The MSES has a structured curriculum, including 4 semesters of 30 ECTS each. Each module is assigned a certain number of ECTS credits, with reference to the number of contact hours, covering theory and practice, and the number of self-study hours.

The accreditation document confirms that the programme learning outcomes are aligned to the requirements in knowledge, skills and competencies in sport and exercise science as communicated by public and private stakeholders, as well as the European Sector Skills Alliance for Sport and Physical Activity (ESSA) summarizing the most important employability skills in the exercise and sport science sector.

The panel was informed that LUNEX considers the current re-accreditation of the Master programme as an opportunity for a revision of the curriculum. Based on current developments in the field of sport and exercise science, the curriculum has been adapted to the current and future needs of the sport and exercise science job market.

7.1.2 Considerations

LUNEX proposes in this Master a multidisciplinary programme addressing human health and performance, with a focus on sport science for diagnostics and training in performance and health on the one hand and education and coaching on the other hand.

The panel has seen the Module Handbook of the Master in Sport and Exercise Science (MSES), that provides information on the building blocks of the curriculum. Exercise physiology,

biomechanics, neuroscience, psychology, and nutrition form the core modules of the programme.

The Module handbook clearly describes intended learning outcomes connected to global descriptions of content, methods of teaching and learning and assessment method. The programme of the MSES is aligned with the Bachelor in Sport and Exercise Science (BSES), but there are also connections to the Master programme in Physiotherapy and the Bachelor programme in Nutrition, Fitness and Health. The panel suggests complementing the information available in the Module Handbook MSES by a general overview of the Master programme (and the horizontal and vertical linkages between the modules), which is currently missing.

The panel understands that the MSES leads to a wide variety of potential professional careers; consequently, the learning outcomes set forward are intended to prepare students for different entry points on the market. Given the focus on education and teaching/coaching in the MSES as one of the main lines in the programme, it strikes the panel that students are not offered advanced knowledge and competencies in didactical and educational aspects at the Master level, in particular as some students complete their internship as Physical Education (PE) teachers in schools. Though the panel acknowledges that the MSES is not intended to be a programme for teachers in PE, it sees some potential for reinforcement of the pedagogical side.

The panel gathered from the information provided and the exchanges during the on-site visit that the arguments for updates in the curriculum are based on the needs of students, stakeholders and of the sector. Modules have been added and/or adjusted based on market research and fields of impact. The panel is positive about the drive of LUNEX to revamp and adapt the programme according to the needs identified.

The revamped programme of the MSES is clearly described in the Accreditation document. It entails a relative change of 20 ECTS following the inclusion of new modules, besides adjustments in existing modules to accommodate, amongst others, the need to reinforce the communication skills of the Master students and educate on state-of-the-art technologies used for diagnostics and training in the laboratory and field.

The module handbook remains vague on what is expected of students (and staff) regarding self-study, nor is it clear what self-study methods are implemented. The panel remarks that Master students can be expected to have a certain degree of independence. However, it is still important to guide them, so that they can make the most of their individual learning moments. It therefore strongly advises the programme leader to clarify to students the expectations in terms of workload to be taken-up to ensure that the self-study component of the MSES covers the ECTS granted, and students benefit fully from self-study time to work towards the intended learning outcomes (see also Standard 2, below).

7.1.3 Conclusion

The panel judges standard 1, intended exit level, to be **met**.

7.2 Standard 2 – Teaching and learning environment

The teaching-learning environment enables the students to achieve the intended learning outcomes.

Reference criteria

- *The workload is appropriate and distributed in a balanced way between semesters.*
- *The relationship between theoretical and practical courses is in line with the programme objectives. Based on the objectives of the programme, internships are planned.*
- *Within the frame of the academic programme leading to the Bachelor's degree, with the exception of alternating courses, a compulsory training period with a university or a higher education institution abroad is included in the programme which is subject to the validation of studies followed outside the home institution.*
- *The admission requirements to the academic programme are clearly defined and published. The admission criteria provide validation of prior experience.*
- *The academic programme has sufficient resources in terms of teachers as well as financial and material resources to cover its specific needs and achieve its objectives. Such resources are available for the entire duration of the academic programme.*
- *Courses are provided by competent staff on the teaching and pedagogical level, capable of linking subject matters to professional practice in the relevant field and current research. Teaching is based on student centred learning, promoting active participation by the students.*
- *The proportion between permanent teachers and external speakers is adapted to the objectives of the academic programme.*
- *Continuing education programmes are provided to teachers.*
- *Adequate supervision and comprehensive information for students are provided. Students are offered tutoring or mentoring programmes.*

7.2.1 Findings

The programme of the MSES covers 120 ECTS credits that are equally spread across 4 semesters. The revamped curriculum follows a core-satellite strategy that keep core modules of the initial accreditation and add satellite modules for developing specific knowledge, skills and competencies and preparing students for the job market in sport and exercise science.

The programme has clearly defined and transparent admission criteria and follows the institutional policy for accrediting prior master-level learning and professional experiences.

From the exchanges, it appeared that the MSES programme is strongly connected to and builds upon the Bachelor programme at LUNEX. In case the Bachelor's degree of an applicant is not directly in the field of sport and exercise science, the programme leader evaluates course content, grades and CV/track-record of the applicant. To account for the heterogeneity of the students' educational background when starting in the Master programme (due to Bachelor's degrees from different universities), the MSES includes an introductory module to align the students' performance level required before starting with the core modules.

In addition to core and satellite modules, the MSES provides research-focused and evidence-based education. Students conduct their own research project in the Master Thesis, to provide their ability for independent and high-quality research. The professional internship that students need to do at an institution associated with the field of sport and exercise science, provides them with good preparation for entering the job market after graduation.

Overall, the curriculum of the MSES has a strong practical component that, in addition to academic knowledge, emphasizes the development of practical skills and competences. This is reflected by large practical components in the modules as well as practical examinations to assess the skills.

The study load of most Modules is 10+ ECTS. For core and satellite modules 6 contact hours are assigned per ECTS (25h). Contact hours include lectures, seminars, and practicals when students are in direct contact with the lecturer.

Modules are predominantly delivered by internal lecturers, while external lecturers cover 37% of the contact hours. The panel gathered that three modules are entirely delivered by external staff (100%), which is appropriate in relation to the 120 ECTS programme.

In addition to the courses in the curriculum, extracurricular activities have specifically been designed for Master students to support developing their knowledge, skills and competencies in different fields relevant for the job market.

7.2.2 Considerations

The panel has analysed the teaching and learning environment of the MSES and is positive about its findings.

The panel has been able to talk to the academic and administrative staff and confirms that staff is very motivated, enthusiastic, and experienced to provide for the courses and deliver the support services in the curriculum. Staff is well-supported by LUNEX in terms of on-boarding (including mentoring for new staff), continuous development, and resources to do their work.

Resources are sufficient to create a supportive learning environment that is student-centred. Staff-student-ratios are adequate, and from the exchanges it had during the on-site visit, the panel gathered tutor programs are available for students. Students confirmed that student support is good and academic staff is easy to approach.

The panel investigated and discussed the module descriptions that were provided. The core modules include a practical component as well as a theoretical component and these seem well-balanced. From the on-site exchanges, the panel gathered that LUNEX wants to differentiate itself from other comparable programmes, based on the practical content of the MSES, and the drive to train students to use new technologies for (Master) research in the field.

It is however less evident to the panel what the logical sequence is of the modules in advancing the process of training and learning (except for the Modules MSES01 and MSES03).

While the goals of the modules were described in detail, the panel lacks clarity on the assessment of workload linked to the size and implementation of the modules. Many modules require a lot of readings, and for some modules a high amount of self-study is accounted for in the workload (e.g. MSES04). To the panel, the combination of contact hours and self-study, and the link to the calculated workload is, overall, not sufficiently justified.

As there are no guidelines or standards to steer the workload to be taken up in the self-study hours, the panel finds it particularly difficult to assess the workload in its entirety. Furthermore, some students indicated in the exchanges with the panel that some course contents (e.g. MSES06 on nutrition) did not exhaust the study load envisaged.

The panel advises the programme in general, and specifically the module coordinators, to ensure that the module contents are sufficiently challenging and require students to effectively handle the workload that is associated with each module (increasing contact hours for more in-depth knowledge about the course topic; increasing the challenge of the self-study time through additional materials and assignments that both broadens and deepens the subject).

On the other hand, the panel is positive about the extracurricular activities offered; it understood that these learning activities – often workshops - are mostly linked to ongoing research projects in LUNEX, in which students can engage and contribute.

7.2.3 Conclusion

The panel judges standard 2, teaching-learning environment, to be **met**.

7.3 Standard 3 – Exit level to be achieved

The programme has an adequate assessment, testing and examination system in place to ascertain whether the intended learning outcomes are being achieved.

Reference criteria

- *The evaluation methods are defined on the basis of the educational objectives.*
- *The evaluation methods applied in the various modules are clearly communicated to the students.*
- *Diplomas and degrees issued by the higher education institution provide information on the acquired qualifications. They are accompanied by a diploma supplement describing the knowledge and skills acquired by the holder.*

7.3.1 Findings

The Accreditation document indicates that evaluation methods in the MSES are defined according to the learning outcomes of the Master programme. Overall, there is the combination of written exams, practical assessments, oral presentations, and written assignment within and across modules to evaluate the student's theoretical knowledge, practical application skills and communication abilities.

Following the request of the Ministry of Research and Higher Education, the panel investigated the provisions for accreditation of prior learning and found these to be adequately covered in the Assessment Regulations. Furthermore, the panel was informed that the Examination Office receives only a limited number of applications for equivalence.

7.3.2 Considerations

The Module Handbook for the MSES includes an overview of the educational objectives and evaluation methods per module, which are communicated to the students. Following the demonstration of the online learning platform Canvas (in place since summer 2023), the panel gathered that full information on learning outcomes, assessments and evaluations is available to the students, also via Canvas.

The panel tried to find the rationale for the different approaches in evaluation methods chosen for the respective modules (only oral presentation (MSES12), practical assessment (MSES11), for other courses only coursework/presentation (MSES03); in the second year of the MSES only written assignments for the internship and Master thesis).

The exchanges with management and staff of the MSES allowed the panel to better understand the context and reasons behind the choices made for certain forms of assessment. The evaluations in the third and fourth semester of the MSES rely heavily on oral assessment (except for internship and master dissertation); this is considered more appropriate to assess the soft skills that students need to master in the second year of the programme, as compared to a dominance of knowledge components accompanied by written exams in year one of the MSES.

7.3.3 Conclusion

The panel judges standard 3, exit level to be achieved, to be **met**.

7.4 Standard 4 – Internal quality assurance

The set-up and the organisation of the internal quality assurance are aimed at systematically improving the programme with the involvement of the relevant stakeholders.

Reference criteria

- *The higher education institution ensures to collect, analyse and use relevant information for the effective management and the continuous improvement of its academic programmes and research activities.*
- *The higher education institution has an internal and external quality assurance system that it makes public and that forms an integral part of its strategic management. The internal and external measures for the quality assurance of the institution are in compliance with the standards and guidelines for quality assurance in the European Higher Education Area (ESG).*
- *The academic programmes are regularly subject to an internal review to ensure they reflect the latest results of research and teaching in the relevant field, that they fulfil the targeted objectives and meet the continuously changing needs of students and society.*
- *Responsibilities, competencies and the decision-making process within the higher education institution are clearly and transparently defined.*
- *Teachers and students have sufficient means to make known their position and to participate in the decision-making process.*
- *The defined institution has a person or a committee dealing with issues relating to equal opportunities policy.*

7.4.1 Findings

The internal QA system is well-described in the Accreditation Document and information on LUNEX's Quality Assurance is available on the website.

LUNEX has an integrated system of collecting feedback from students around academic teaching quality, based on surveys amongst students on the teaching they received in each module. Internships are also surveyed from both the student's and institution's points of view.

From the module evaluation surveys, module monitoring reports are produced. In addition, programme leaders hold face-to-face meetings with the cohort representatives twice a year, which gives students an opportunity to discuss their concerns in person. Module monitoring reports and programme reviews are written every year. Each programme review is considered and approved at the Teaching & Learning Council (TLC) level by the members of the Council. The panel learned that the Teaching and Learning Council (TLC) is the dedicated body for internal quality assurance. All changes supporting programme improvement are reviewed at this level.

In the current QA system, a lot of work is done at module level and focuses on teaching quality. Input of students is then taken up to programme level. Students get a summary of the key points of their feedback that is considered and leads to adjustments. This can be seen as a good practice.

Students are represented in institutional bodies and councils (Senate, Teaching and Learning Council, Research Council). Moreover, student representatives have regular meetings with the Academic Director and the Head of Administration.

Though the representation of students is guaranteed, and the decision-making process is clear to staff and students, the panel notes that there is limited active involvement of students in the councils and other institutional bodies.

LUNEX is also using the individual (academic) networks of the staff to benchmark the quality and relevance of its programmes. The panel gathered from the discussion with representatives of the professional field that they are keen to increase the cooperation with LUNEX and provide guidance and input on a more structural basis.

The panel learned that LUNEX is committed to providing a supportive and inclusive environment for all individuals in its organisation, independent of culture, perspectives, beliefs, and experiences. It has established a Gender Equality Plan and is currently developing

a mechanism dedicated to implementing an equal opportunities policy. The panel encourages LUNEX to expand this policy further, going beyond matters of gender equality.

7.4.2 Considerations

The panel confirms that the internal quality assurance system on a programme level is well structured and clearly described. The system is driven by a strong bottom-up approach. Quality assurance is implemented at the departmental and programme level, including feedback from staff and students through module evaluations on a yearly basis.

In terms of QA at programme and course level, students are invited to evaluate each module. They emphasised that their comments are heard by the individual module coordinator and the programme management. Furthermore, students appreciate the small-scale character of the programme, which allows for much interaction between students and staff. Students mentioned that staff manages to create a positive atmosphere and a safe environment, in which students feel at ease to bring forward issues of concern.

The panel has seen a drive to continuously improve the module quality based on the surveys, as well as on input at programme committee meetings and including additional students' and stakeholders' feedback (e.g., guest lecturers), noting common themes. However, the panel notes that quality assurance of the modules provided by external staff is an element that requires improvement. It expects the programme leader to take this up.

The panel also gathered from the discussion with representatives of the professional field that they are keen to increase the cooperation with LUNEX and provide guidance and input on a more structural basis. Hence, the panel's suggestion to establish a formal relationship with the professional stakeholders in the field of Sport and Exercise Science, including internship mentors and alumni. Hereby, the panel sees opportunities to develop clearer guidelines about expectations in the collaboration with external partners; this includes making clear choices in the selection of partners for internships and setting-up stricter monitoring for the work done during internships.

Furthermore, the panel was informed that the financial compensation for internships is a matter that will appear on the agenda, largely due to new regulations in Luxembourg that require payment for longer-term internships (beyond 4 weeks). The panel encourages LUNEX to clarify its position in this regard, taking into account that students are not necessarily ready to waive their right to be paid in the contract that LUNEX proposes them to sign when engaging in the internship. The financial aspects related to internships should be balanced and evaluated against the possibilities for sufficient and high-quality internships in Luxembourg and abroad. To the panel, it is essential that LUNEX guarantees with its policy equal treatment for all students taking up internships, whether in Luxembourg or abroad.

In view of the growth scenario envisaged by LUNEX, the panel recommends broadening the scope of the internal QA system and the underlying processes. To drive its QA system for the future, the panel underlines that LUNEX would benefit from performant, institution-wide mechanisms to keep track of where it wants to go and whether its processes allow to deliver its objectives with the required quality. The panel encourages the institution to consider the following aspects:

- create a systematic structure for involving employers, supervisors, external stakeholders in the quality insurance cycle.
- development of a standard for what is expected in relation to internships, along with establishing an operational monitoring process; this to ensure clear alignment of student learning in the internships and adequate assessment of the intended learning outcomes by the tutors in the professional field.
- investment of time and effort with external partners and stakeholders (the professional fields) to ensure alignment of expectations and equivalence of student experience.

- consider the selection of internship partners more strategically and in line with the institutional profiling (see also Institutional assessment, criterion G, above).
- include growth of student numbers and an increasing need for sufficient and qualitative internships in the QA processes and as part of the risk assessment plan.
- formal inclusion of criteria for the recruitment of external staff in the institutional policy for recruitment of staff (see also Institutional assessment, Criterion D, above).
- ensure institutional QA processes with regards to the level of self-study for all existing and new study programmes. The self-study component of the programme requires clear monitoring and evaluation to ensure it is aligned with the attributed study load.

While the current internal quality assurance processes at the level of the modules and the programme are fit for purpose, the panel identifies the lack of institutional oversight and quality assurance processes in some of the key areas that were raised through the programmes (study hours, self-study time, internships) as a weakness. As these impact on the ability to meet the strategic goals, the panel urges LUNEX to take appropriate action at institutional level.

7.4.3 Conclusion

The panel judges standard 4, internal quality assurance, to be **partially met**.

7.5 Standard 5 – Research

The higher education institution performs, in the relevant areas, basic oriented research activities or applied research activities as defined in article 1 of the law of 3 December 2014 on the organisation of public research centres. These research activities will lead to publications in the institution's name in international scientific and peer-reviewed journals. The institution incorporates the results of its research in the education it is providing.

Reference criteria

- *The higher education institution performs, in the relevant areas, basic oriented research activities or applied research activities as defined in article 1 of the law of 3 December 2014 on the organisation of public research centres. These research activities will lead to publications in the institution's name in international scientific and peer-reviewed journals.*
- *The institution incorporates the results of its research in the education it is providing.*

7.5.1 Findings

LUNEX profiles itself as a specialised higher education institute or 'university', that is paying considerable attention to research. During the visit, the panel discussed on several occasions the current research activities of the team and its ambitions for the future.

Moreover, the panel was informed about the role of the Research Council (RC), which LUNEX has established to encourage and support research, to advise the institution on the research lines to take and to stimulate and maintain scientific excellence. To foster cross-departmental research activities and achieve a transdisciplinary research approach, the Research Council (RC) has defined the research fields of interest in specific areas, that allow collaborative and creative research approaches, so as to make use of the multidisciplinary expertise of academic staff.

With its research agenda LUNEX wants to bridge knowledge gaps in for example Physiotherapy, and Sport Exercise and Sport Management, extending the research strengths to more complex social and health questions. The existence of the LUNEX Ethics Committee is positive, as this considers and advises on ethical issues in relation to research within the Institution.

The research performed by the academic staff in the Master in Sports and Exercise Science finds its way directly to some of the modules. Overall, students are stimulated to follow and engage in research activities and research projects of staff. They are introduced to research findings and research methods by a mix of individual and group tasks in some of the modules at Bachelor and Master level.

Some examples of the guidance of students towards the lines of research that are considered relevant in LUNEX were provided, such as participation of students in lab-activities, introduction to data-management, guidance to research-based experience for doing their Master thesis, or participation in science-based workshops to promote science to the public.

In addition, involvement of the community fosters research on community-relevant topics (e.g., fall prevention and innovative rehabilitation approaches) as part of the research activities undertaken by Physiotherapy and Sport and Exercise Science students, while conducting their Master thesis.

7.5.2 Considerations

Overall, the panel confirms that there are good research facilities available at LUNEX, and there is sufficient research staff, primarily funded from the institution itself. For the Master in Sport and Exercise Science, the research line in LUNEX is active and follows current standards in Europe. Academic staff performs adequate research activities that is leading to international publications in peer-reviewed journals and is presenting its findings at relevant conferences.

The panel is positive about the way LUNEX is integrating research into the academic programme of the Master in Sport and Exercise Science. Students are confronted with research findings and methods; they are also triggered to actively contribute to and perform their own research activities in the research lab that is open to them, including for practical sessions. The panel encourages the programme to continue on this path; it sees clear opportunities for research in the programme to be linked to societal challenges (e.g., obesity, lack of physical activity) and make a positive social impact.

The panel is of the opinion that research in the programme could however further improve, not only from a more explicit alignment with LUNEX (future) strategy, but also from clear engagement in relation to the challenges in the professional field, as well as the societal challenges in and outside Luxembourg.

The investments of a young institution such as LUNEX for building a research partner network are highly appreciated by the panel. The panel remarks that in the light of the great ambition to become a leading specialised higher education institution for sport and health in Europe, LUNEX may require a strategic partnership with one or two established, strong partners. Such strategic partnerships can function as a benchmark and reference point to further develop and position itself in the relevant research field. Also, aiming for more external funding could support the connections and alignment with the outside knowledge and innovation agendas, both inside and outside Luxembourg.

7.5.3 Conclusion

The panel judges standard 5, research, to be **met**.

7.6 Overall conclusion

The overall judgment of the panel for the accreditation standards for the programme of **Master in Sport and exercise Science** is '**partially met**'. The panel assessed all standards as '**met**', except for **standard four** that was judged as '**partially met**'.

LUNEX proposes the Master in Sport and Exercise Science (MSES) as a multidisciplinary programme addressing human health and performance, with a focus on sport science for diagnostics and training in performance and health on the one hand and education and coaching on the other hand.

The panel was informed that LUNEX considered the re-accreditation of the Master programme as an opportunity for a revision of the curriculum, based on the needs of students, stakeholders and of the sector.

The revamped programme of the MSES is clearly described in the Accreditation document. It entails a relative change of 20 ECTS following the inclusion of new modules, besides adjustments in existing modules to accommodate, amongst others, the need to reinforce the communication skills of the Master students and educate on state-of-the-art technologies used for diagnostics and training in the laboratory and field.

All modules in the MSES programme are blended with practical application, that allow students to work with state-of-the-art technology in sport and exercise science.

While the goals of the modules were described in detail, the panel would have liked more clarity on the assessment of workload linked to the size and implementation of the modules. Many modules require a lot of reading by the students, and for some modules a high amount of self-study is accounted for in the workload. To the panel, the combination of contact hours and self-study, and the link to the calculated workload is, overall, not sufficiently justified.

The module handbook remains imprecise on what is expected of students (and staff) regarding self-study, nor is it clear what self-study methods are implemented. The panel therefore urges the programme leader to provide clear guidance in terms of workload and challenges to be taken-up during self-study, so that students can make the most of their individual learning moments.

On the other hand, the panel is positive about the extracurricular activities offered; it understood that these learning activities – often workshops - are mostly linked to ongoing research projects in LUNEX, in which students can engage and contribute.

7.7 Overview of assessments

Standard		Judgement
1	Intended exit level	Met
2	Teaching-learning environment	Met
3	Exit level to be achieved	Met
4	Internal quality assurance	Partially met
5	Research	Met
Overall judgement		Partially met

8 Annexes

8.1 Annex 1 – Composition of the panel

Fiona Crozier (chair), Independent Consultant. Breadth, and depth of experience in QA in HE: institutions & agencies; national & international; internal & external QA; strategic & operational. Experienced in developing strategies and accompanying policies and in ensuring that they are operational. United Kingdom.

Dr. Inge Derom, Associate Professor at the Department of Movement and Sport Sciences in the Faculty of Physical Education and Physiotherapy at the Vrije Universiteit Brussel, Belgium.

Dr. Jorit Meesters, Professor of Applied Sciences Rehabilitation and Technology at The Hague University of Applied Sciences, the Netherlands.

Dr. Emiel van Trijffel, Manager ZGT Academy, Ziekenhuisgroep Twente, Almelo, Board member, Civo Zorgopleiders, Hengelo, the Netherlands.

Geert Hendriks, Chief Engagement Officer and General Manager The SHIFT, Lausanne, Vaud, Switzerland.

Bobana Samardžija (student member), Phd-student in Medicinal Chemistry at the University of Rijeka, Croatia. Member of the QA Student Experts Pool of the European Students' Union (ESU).

The panel was supported by:

- Dagmar Provijn, NVAO process coordinator
- Anja Detant, secretary

All panel members and the secretary have signed a declaration of independence and confidentiality.

8.2 Annex 2 – Schedule of the visit

LUNEX International University of Health, Exercise & Sports SA
50, Avenue du Parc des Sports
4671 Differdange, Luxembourg

WEDNESDAY 22 NOVEMBER 2023

08.15 – 08.45 Panel arrives at LUNEX, closed panel meeting
08.45 – 09.45 Institutional assessment: meeting with institutional management
09.45 – 10.30 Institutional assessment: meeting with representatives of the Research Council and the Teaching & Learning Council
10.30 – 11.00 Closed panel meeting
11.00 – 11.45 Institutional assessment: meeting with HRM/staff responsible for staff recruitment and qualifications
11.45 – 12.30 Institutional assessment: meeting with facilities managers and support staff for the infrastructure
12.30 – 13.30 Lunch and closed panel meeting
13.30 – 14.30 Institutional assessment: meeting with international officers, staff, students (internationalisation)
14.30 – 15.30 Tour of the facilities and demo of online systems
15.30 – 16.30 Closed panel meeting and review of materials
16.30 – 17.30 Institutional/Programme assessments: meeting with employers, alumni, and other external stakeholders of the assessed programmes
17.30 – 18.15 Closed panel meeting and review of materials
18.15 End of day one

THURSDAY 23 NOVEMBER 2023

08.15 – 08.45 Panel arrives at LUNEX, closed panel meeting
08.45 – 09.45 Programme assessment: meeting with the management of Master in Physiotherapy
09.45 – 10.00 Closed panel meeting/break
10.00 – 11.00 Programme assessment: meeting with staff members of Master in Physiotherapy
11.00 – 11.15 Closed panel meeting/break
11.15 – 12.15 Programme assessment: meeting with the management of Master in Sport and Exercise Science
12.15 – 13.15 Lunch and closed panel meeting
13.15 – 14.15 Programme assessment: meeting with staff members of Master in Sport and Exercise Science
14.15 – 14.30 Closed panel meeting/break
14.30 – 15.30 Programme assessments (two Masters): meeting with students
15.30 – 16.00 Closed panel meeting/break
16.00 – 17.00 Programme assessment: meeting with the management of the Bachelor in Osteopathy
17.00 – 17.15 Closed panel meeting/break
17.15 – 18.15 Programme assessment: meeting with staff members of the Bachelor in Osteopathy
18.15 End of day two

FRIDAY 24 NOVEMBER 2023

08.30 – 09.00 Panel arrives at LUNEX

09.00 – 11.00 Closed panel meeting

11.00 – 11.30 Short feedback by the panel on the preliminary findings on the institution and programmes

11.30 – 12.00 Lunch

12.00 – 13.00 End of site visit and departure of panel – transfer to the Ministry of Research and Higher Education of Luxembourg

13.00 – 14.00 Feedback meeting with the Ministry of Research and Higher Education of Luxembourg (Luxembourg city)

8.3 Annex 3 – Documents reviewed

ACCREDITATION DOCUMENT

- Accreditation Request

ANNEXES OF THE ACCREDITATION DOCUMENT

- Annex 1 – LUNEX University Bachelor and Master Assessment Regulations
- Annex 2 – LUNEX University Accreditation of Prior Learning and Experience Policy
- Annex 3 – LUNEX University Personnel Recruitment Policy
- Annex 4 – LUNEX University Rules for the Appointment of Professorships
- Annex 5 – LUNEX University HR Continuous Development Policy and Procedure
- Annex 6 – Approach and Policy for Student Support
- Annex 7 – Student Support Operational Process
- Annex 8 – LUNEX University Research Council Constitution
- Annex 9 – LUNEX University Research Outcomes from 2019
- Annex 10 – LUNEX University Research Fundraising Table
- Annex 11 – LUNEX University Current Research Project Table
- Annex 12 – LUNEX University Partnerships & Collaborations Table
- Annex 13 – LUNEX University Gender Equality Plan
- Annex 14 – Accreditation Fee – BOST, MSES, MPTY
- Annex 15 - Bridging Programme Leading to the Master in Osteopathy dedicated to Physiotherapy graduates from LUNEX University
- Annex 16 – LUNEX-DELOITTE report on Osteopathy
- Annex 17 – Module Handbook Bachelor in Osteopathy
- Annex 18 – Module handbook Master in Sport and Exercise Science
- Annex 19 – Module handbook Master in Physiotherapy
- Annex 20 – Draft Module handbook Master in Physiotherapy
- Annex 21 – LUNEX University Research Integrity Code of Practice
- Annex 22 - Main staff members and recruitment plan - BOST
- Annex 23 - Main staff members and recruitment plan – MSES
- Annex 24 - Main staff members and recruitment plan – MPTY
- Annex 25 – Letter of Support MPTY
- Annex 26 – Letters of Support MSES

Software available for demonstration: CANVAS (Learning Management System) and related software (Ans, Turnitin); SONIA (Placement Management Software).

ADDITIONAL INFORMATION REQUESTED BEFORE THE SITE VISIT

Requested information at institutional level (both on education and research)(received before the site visit)

- Strategic plan (how do offered programmes and research relate to it)
- Financial plan
- Financial results
- Information on alumni-network
- Information on relevance studies/market analysis for new programmes

- Staff scaling and information on career opportunities and career paths
- Quantitative data:
 - Employment rate of permanent staff in FTE (+ information on how long permanent staff members are already employed at LUNEX university)
 - Student/staff ratio per programme
 - Permanent/non-permanent staff ratio per programme
 - International mobility numbers
 - Number of student representatives + information on which boards they have a seat and voting rights

Requested Course Materials (received during the site visit)

Bachelor in Osteopathy

- BOST02 Research and Evidence in Osteopathy I
- BOST14 Craniosacral Osteopathy
- BOST23 Bachelor Dissertation

Master in Sport and Exercise Science

- MSES04: Applied Sport and Exercise Psychology
- MSES06: Nutrition for Health and Sport in Exercise Science

Master in Physiotherapy

- MPTY05 Research and Evidence -based Practice in Healthcare 2
- MPTY08 Practice and Clinical Reasoning in Neuro- Musculoskeletal Physiotherapy 3

For all modules mentioned, when not already mentioned in the Modules Handbooks (annexes 17-18-19)

- Overview of the module (schedule of content and teaching method)
- Responsible teaching team (titular and assistant(s))
- Split between lectures and practicals/lab sessions (based on hours) and how these are organised
- Content of the practicals/lab sessions (examples of assignments)
- Expectations from the students in attending practicals/lab sessions
- Expectations from the students in terms of self-study
- Examples of written exams, oral presentations and coursework
- Assessment criteria and methods (evaluation)
- Required readings (concrete package for one year)

For the two Master programmes: at least two Master dissertations – research projects (student submissions)

- One master dissertation evaluated as excellent
- One master dissertation evaluated as poor

ADDITIONAL INFORMATION REQUESTED DURING THE SITE VISIT

- LUNEX University – Strategy presentation
- Amended version of annex 17
- Literature resources available to the students – journals and ebooks
- PSP Convention: Art 10. Respect for research standards and scientific ethics
- Erasmus+ mobility grant agreement 2023/2024: Art 14 Ethics and Values
- PODiacar project Grant Agreement Core: page 29 to the page 35

- SG3 project: grant agreement and annex 2. Annex 2 is covering scientific integrity and ethical conduct (see articles II.5 Conflict of interests, II.6 confidentiality, II.7 processing of personal data)
- WADA project 2023: article 2.2 the requirement to adopt scientific rigor and integrity: The Research Team “ *shall conduct the Project under its own responsibility in a professional manner conforming to generally accepted practices within the research community as well as applicable international and local ethical standards.*”

