ASIIN Seal

Accreditation Report

Master's Degree Programmes
Tropical Infectious Diseases and Zoonosis
One Health Analytical Epidemiology

Provided by the
University of Zambia, Lusaka

Version: 10 December 2024

Table of Content

A About the Accreditation Process

Name of the degree program (in original language)	(Official) English translation of the names	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Master of Science in One Health Analytical Epidemiology		ASIIN	Higher Education Authority (HEA-Zambia) 2021-2025	14
Master of Science in Tropical Infectious Diseases and Zoonosis		ASIIN	Higher Education Authority (HEA-Zambia) 2021-2025	14
Date of the contract: 09.03.2022 **Submission of the final version of the self-assessment report:** 30.08.2022 **Date of the audit:** 06.03.2023 – 10.03.2023				
Expert panel: Prof. Dr. Hans Tillmann Rümenapf, VetMed University of Vienna, Austria. Prof. Dr. Lamine Gueye, ANAQ-Sup, Sénégal Dr. Sophie Schneitler, University Hospital Saarland, , Germany Naomi Kaonga, Sokoine University, Student, Zambia				
Representative of the ASIIN headquarter: Dr. Iring Wasser				
Responsible decision-making committee: Accreditation Commission				
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of December 10, 2015				

[1] ASIIN Seal for degree programs

[2] TC: Technical Committee for the following subject areas: TC 14 Medicine

B Characteristics of the Degree Programs

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Master of Science in One Health Analytical Epidemiology		-	7	Full time	no	4 Semester	247.4 Zambian credits (82,5 ECTS)	2011
Master of Science in Tropical Infectious Diseases and Zoonosis		-	7	Full time	no	4 Semester	271.7 Zambian credits (90,6 ECTS)	2020

The experts take note of the institutional framework conditions, under which the two Master programs under review are offered:

The **University of Zambia** (UNZA) has been established by the Government of the Republic of Zambia through the University of Zambia Act 66 in 1965 and commenced operations one year later. At the time of its initiation, the University had three Schools, namely Education, Humanities and Social Sciences as well as Natural Sciences and enrolled a little more than 300 students. Over the next decades, the number of enrollments grew markedly and new school infrastructure and facilities were added. These were the Schools of Law (1967), Engineering (1969), Medicine (1970), Agricultural Sciences (1971), Mines (1973), Business and Industrial Studies (1978) as well as Environmental Studies (1981); the Schools of Business and Industrial Studies and Environmental Studies today are part of the Copperbelt University in the northern part of the country. Other Schools/Institutes, which came into existence at a later point in time, included a Graduate School of Business Studies, the Institute of Distance Education, the Schools of Health Sciences, Nursing and Public Health as well as the Agricultural Technology Demonstration Centre.

[3] EQF = The European Qualifications Framework for lifelong learning

The **School of Veterinary Medicine,** home to the two countries under review, was established with the support of the Japanese Government in memory of the first President of Mozambique Dr. Samora Machel. The first batch of students in 1983 consisted of 14 students in the Bachelor program Veterinary Medicine, today the target enrolment amounts to around 100 students per year from Zambia and neighboring African countries. The Schools is organized in four Departments, which are the Departments of Biomedical Sciences, Clinical Studies, Para-Clinical Studies as well as Disease Control.

The School and its four Department currently offer **one undergraduate Bachelor program in Veterinary Medicine** since 1983 as well as altogether **six Master programs**. Apart from the two programs under review (which are offered in the Department of Disease Control), additional Master programs are offered in the area of One Health Food Safety, Food Safety and Risk Analysis, Ecological Public Health as well as One Health Laboratory Diagnostic Sciences. The vast majority of this postgraduate programs have been introduced only very recently in connection with the creation of the **African Centre of Excellence for Infectious Diseases of Humans and Animal (ACEIDHA)** in 2018 (see further below).

As regards the two Master programs under review, the ***Master of Science in One Health Analytical Epidemiology*** was launched in 2011 with the following rationale as described on the website:

"Zambia experiences a number of endemic and epidemic diseases. These diseases have an impact on the government's intention to meet its development aspirations as espoused in the Sixth National Development Plan (SNDP), which was developed in 2011 and revised in 2013 to guide economic development in Zambia. The SNDP places health and poverty alleviation as a priority to attain economic sector development. The SNDP goal is to increase resource allocations (GRZ and donor) to the health and agricultural sectors. The key interventions in health and agriculture, according to the SNDP, will be to improve the well-being of Zambian people, infrastructure development and rehabilitation, enhance disease control, surveillance and research, and develop public health and livestock standards. Clearly, in light of the above, skilled manpower will be required by the Ministries of Health and Fisheries and Livestock to manage these activities, including other cooperating partners and Non-Governmental organizations."

Before this background, the Master of Science in One Health Analytical Epidemiology is designed "to prepare the local and international learners to become skilled in public health and veterinary professionals who are competent to play a key role towards the improvement of human and livestock health using the One Health approach. Particular attention has been paid to ensuring that theory and practice are blended to provide adequate opportunities for learners to develop appropriate knowledge, skills, and attitudes."

As regards the ***Master of Science in Tropical Infectious Diseases and Zoonosis***, the rationale for its creation in the year 2020 is described as follows:

"Infectious diseases continue to pose a major threat to the health of people in most developing nations. The emergence and spread of infections like extensively drug resistant tuberculosis, ebola, dengue, chikungunya, and avian influenza have highlighted the importance of effective global response to epidemic threats. This program is a two-year Master of Science and highlights examples of the major viral, rickettsia, bacterial, protozoal, parasitic, and fungal infections transmitted from wild and domesticated animals to humans, especially in the context of detection, identification and responding to these infectious pathogens. Since the programme covers diseases transmissible from animals to humans, it provides additional training in the epidemiology of infectious diseases for persons pursuing careers in public health and related disciplines such as diagnostic microbiology, parasitology and pathology. In this programme, professionals ranging from clinicians, nurses, policymakers, researchers, veterinarians and health educators share questions, successes, and lessons learned to advance the field of tropical infectious diseases of global importance. It should be understood that the 'One Health Concept' emanates from the fact that infectious diseases of humans and animals are increasingly becoming a matter of concern to human welfare and economic development. The realization that most emerging human pathogens are of animal origin makes infectious diseases a shared problem between human and animal health sectors, and their control a common objective of 'One Health'. Efficient and reliable diagnosis of zoonotic diseases remains a cornerstone of their prevention and control. The University of Zambia, School of Veterinary Medicine and Disease control Department, have facilities and capacity to drive the agenda on tropical infectious diseases training. Zambia being in Africa and Africa being part of the global entity is host to larger natural features such as wetlands, forests and deserts that harbor wildlife and environments that propagate one health microorganisms."

To fully comprehend the framework conditions of this accreditation process, it is also important to note, that the two Master programs submitted for international accreditation by ASIIN are offered under the institutional umbrella of ***ACEIDHA,*** the African Centre of Excellence for Infectious Diseases of Humans and Animal (ACEIDHA). This ACE Center was launched on 25th April 2018 by the Zambian Minister of Higher Education to tackle increasing challenges of emerging infectious diseases affecting both humans and animals. It was formed through the World Bank loan to the Republic of Zambia. The Centre is anchored at the University of Zambia in the School of Veterinary Medicine.

ACEIDHA's main objective is to develop research capacity and improve the training of academic staff and students with the focus centered on research into infectious diseases,

which affect both humans and animals, such as bird flu, ebola, tapeworms, brucellosis, anthrax, and others.

Last but not least, it is important to mention, that the Republic of Zambia recently has published its “National One Health Strategic Plan”, which is summarizing the aspiration of the countries´ “One Health” policies for the next 5 years. This Plan will in the future provide important opportunities for the programs at hand.

C Accreditation Report for the ASIIN Seal

1. The Degree Program: Concept, content & implementation

Criterion 1.1 Objectives and learning outcomes of the degree programs (intended qualifications profile)

Evidence:

- Self-assessment report
- Program and Module Learning Outcome Definitions
- Discussion during the audit

Preliminary assessment and analysis of the peers:
The University of Zambia and its of School of Veterinary Medicine according to their own account aspire educating veterinarians, who will be recognized internationally, competent to engage in the promotion of animal production development in Zambia and elsewhere through improved animal health control, surgical intervention, breeding and nutritional programs. The graduate are to be well versed in the promotion of public health through the control of zoonotic diseases and other infections transmitted to man though human products. They in addition should be able engaging in basic and applied research in the field of veterinary medicine and surgery teaching, in academic curriculum development in veterinary education as well as in the promotion of appropriate livestock and poultry products.

On the level of the two Master programs under review, the following boundary conditions are cited and the subsequently listed program learning outcomes delineated:

As regards the **Master in Tropical Infectious Diseases and Zoonosis,** the representatives of the School and the responsible Department of Disease Control allude to the starting conditions for the initiation for this study program. It was launched before the background that infectious diseases continuously pose a major threat to the health of people in Zambia and most other African nations. The emergence and spread of infections like extensively drug resistant tuberculosis, ebola, dengue, chikungunya, and avian influenza have highlighted the importance of effective global response to epidemic threats. The Master in Tropical

Infectious Diseases responds to this perceived threat by preparing students to deal with the major viral, bacterial, protozoal, parasitic, and fungal infections transmitted from wild and domesticated animals to humans, especially in the context of detection, identification and responding to these infectious pathogens.

In line with this rationale, graduates of the program are expected to:

i. Demonstrate knowledge and critical understanding of selected tropical infectious and zoonosis for the region.
- Demonstrate current knowledge of emerging and re-emerging infectious diseases.
- Illustrate modes of transmission of diseases between animals and man and differentiate between direct contact, indirect contact, vector-borne and foodborne carriage of infections of animals and man.
- Design, implement and evaluate co-ordinated control methods for human and animal infectious diseases.
- Demonstrate ability to develop strategies for mitigation, prevention and control of infectious and zoonotic diseases.
- Plan and conduct research using research principles in design and undertaking a research study in the field of infectious diseases.

Concerning the **Master of Science in One Health Analytical Epidemiology**, this graduate program aims at developing human resource capacity in Zambia and other African countries (especially in the South African Development Community) for research in both veterinary and human medicine as part of "The One Health Concept." The 'One Health Concept' emanates from the fact that infectious diseases of humans and animals are increasingly becoming a matter of concern to human welfare and economic development. The realisation that most emerging human pathogens are of animal origin makes infectious diseases a shared problem between human and animal health sectors, and their control a common objective of 'One Health'. Therefore, a need has been identified having shared training in epidemiology between the professionals of these two health sectors developing a common understanding of the problems posed by these diseases and offering an opportunity for health professionals from different fields to interact and share their experiences. This co-operation will hopefully result in the development of workable solutions that can effectively be used to prevent and control disease outbreaks in African and all other affected populations.

In line with this rationale, the following program learning outcomes have been defined: upon graduation, students are expected to:

- Demonstrate knowledge of the concept of "One Health" and its application in developing health policy and the control and prevention of infectious diseases.

- Demonstrate knowledge of how interactions between human and animal populations and the environment can lead to an emergency and re-emerging of infectious diseases.
- Plan and undertake research, analyse data from a research project concerning human, animal and zoonotic diseases, and monitor and evaluate activities for policy and program development.
- Apply a scientific style of writing in the presentation of research.
- Apply economic and socio-economic concepts and methods to design, implement, and evaluate health delivery services.
- Determine the factors affecting the spread of disease through human and animal populations and be able to prevent or control such spread.

The Program Learning Outcomes (PLOs) for both programs under review have been developed in a broad stakeholder process. This included discussions with and input from governmental institutions such as the Ministries of Health, Fisheries and Livestock, Agriculture, Water Development and Natural Resources. Regulatory agencies/governmental organisations such as the Zambian Environmental Management Agency and the Water Resources Management Authority and non-governmental organizations such as Livestock Cooperative Services, ZAMBEEF were equally involved and the cooperation with the Southern African Centre for Infectious Diseases (SACIDS) proved to be of great importance. The recent, most important launch of the inter-ministerial National One Health Strategic Plan of the Republic of Zambia, outlining the aspirations for the next years, will certainly positively affect the further fine-tuning of the Program Learning Outcomes in the years to come.

The School of Veterinary Medicine and its Department of Disease Control also present a matrix matching the above listed Program Learning Outcomes with the outcomes of the various courses, which constitute the two Master programs, analyzing in detail the contribution of each module to the overall PLOs.

As regards the issue of **employability**, not much information is currently available. The School of Veterinary Medicine and its Departments of Disease Control has thus far not developed and published graduate profiles, which are instrumental in providing potential and enrolled student with more information about future employment opportunities.

The University of Zambia representatives also minute that in the past no tracer studies regarding the professional trajectories for its graduates have been executed in order get useful background information regarding the relevance of the two study programs for finding suitable and attractive job positions in Zambia and internationally. In this context, it is important to understand, that the development of programs on the Master level in general has only in recent years been put on the national higher education agenda and that there is not really a long tradition of welcoming Master graduates on the Zambian job market.

In their assessment of this criterion, the ASIIN expert team comes to the following conclusions:

The experts find that there is an obvious and strong raison d´etre for both programs under review with the Corona Crisis being the last accelerator in a long list of dealing with infectious diseases and manifold One-Health issues at the horizon. They confirm that the Program Learning Outcomes for both programs have been appropriately designed taking into account the exigencies of a broad range of stakeholder in Zambian and the South African Development Region. During their discussions with different stakeholder groups, the expert group finds evidence that they are regularly involved in the continuous assessment and further development of the program learning objectives. The experts also appreciate that the Department has successfully engaged in aligning the PLO´s with the course learning outcomes adequately described in the two module handbooks.

The experts attest that the learning outcomes of the two programs under review correspond to level 7 of the European Qualification Framework and the Dublin Descriptors respectively. The programs in addition satisfy the requirements of ASIIN´s Subject Specific Supplementary Notes of its Technical Committee for Medicine.

In their interviews with representatives of students and the employment sector, the experts however identify a need for the Department of Disease Control further specifying concise graduate profiles for the two programs under review for a number of reasons. Especially among students, it turns out that there are many questions regarding their job perspectives after graduation. As to the employer side, more information needs to be conveyed regarding the added benefit of graduate degrees, which are largely new on the Zambian labor market. A third aspect relates to the fact, that the School and its four Departments have launched a considerable number of Master programs overlapping in content. This increases the need in the expert´s eyes working out more precisely the various employment opportunities of these educational offerings.

The experts furthermore identify a need quickly starting the implementation of regular tracer studies and investing in the buildup of an alumni network. The lack of tracer studies is mentioned as an area of improvement in the Universities´ own SWOT analysis and is also part of its Internal Quality Assurance System as described in QA manual (for more information refer to criterion 5 of this report).

Criterion 1.2 Name of the degree program

Evidence:

- Self-assessment report
- Discussion during the audit
- Diploma and Diploma supplement

Preliminary assessment and analysis of the peers:
The experts confirm that the name of the program correspond to the intended aims and learning outcomes as well as the main course language.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Curricular overview of the study programs under review
- Module handbooks of the study programs under review
- Discussion during the audit

Preliminary assessment and analysis of the peers:
The **Master of Science in Tropical Diseases** is a full-time program of a duration of two years with 271.1 Zambian credits or 82,5 ECTS attached to it. The qualification level of this program corresponds to level 9 of the Zambian Qualification Framework (level 7 of the European Qualification Framework). It has been on offer since 2020 and belongs to the category of a "research master".

The first two semester consist of taught courses while the second year comprises supervised research work in tropical infectious diseases and zoonosis. This research phase eventually culminates in the submission of a Master dissertation, the dissemination of results for policy decisions and program improvement, and the submission of a manuscript for possible publication as required by UNZA´s Directorate of Research and Graduate Studies guidelines.

In their first year, students take courses in "One health Medicine and Globalisation", "Research methodology and Computer applications", "Principles of Epidemiology and Biostatistics", "Infectious Diseases and Zoonosis", "Immunology of Infectious Diseases", "Principles of public health and policies", "Bioethics and Welfare", "Molecular Epidemiology & Bioinformatics", "Infectious Disease Modelling and Geographical Information Systems" as well as "Laboratory diagnostic Methods and Techniques".

The core courses focus on tropical infectious and zoonosis disease understanding as well as current trends of emerging and re-emerging infectious diseases. This generic knowledge on infectious diseases is applied in the design of the research proposal leading to research, results analysis and results dissemination through dissertation and manuscript write up. Of the courses mentioned, those with a stronger research focus are Research Methodology & Computer Applications, Infectious Disease and Zoonosis and the Laboratory Diagnostic Methods and Techniques as well as One Health Medicine and Globalization.

Since the programme covers diseases transmissible from animals to humans, it provides additional training in the epidemiology of infectious diseases for persons pursuing careers in public health and related disciplines such as diagnostic microbiology, parasitology and pathology. In this programme, professionals ranging from clinicians, nurses, policymakers, researchers, veterinarians and health educators share questions, successes, and lessons learned to advance the field of tropical infectious diseases of global importance.

The 'One Health Concept' constitutes the umbrella for this (as well as the second) Master program. This is due to the fact that infectious diseases of humans and animals are increasingly becoming a matter of concern to human welfare and economic development. The realization that a lot of emerging human pathogens are of animal origin makes infectious diseases a shared problem between human and animal health sectors, and their control a common objective of 'One Health'. Efficient and reliable diagnosis of zoonotic diseases remains a cornerstone of their prevention and control.

As regards the **Master of Science in One Health Analytical Epidemiology**, this two-year programme at the University of Zambia has been on offer since 2011 and has 274.4 Zambian credits or 92,6 ECTS attached to it. This postgraduate program is also ranked on level 9 on the Zambian Qualification Framework (level 7 EQF). Since its inauguration, more than 100 students have graduated from this program from Zambia and a number of neighbouring African countries.

This Master program also belongs to the category of a "Research Masters", curriculum constitutes da well-balanced combination of theory and practical skills. The teaching staff comes with from different backgrounds, including social, medical and veterinary scientists, results in the production of graduates with a broader understanding of the various health challenges that the countries in the region in general and Zambia, in particular, are faced with.

As to the curricular structure, students in the first year must take a wider array of different courses. They enrol in "Re-emerging diseases", "Principles of Epidemiology and Biostatistics", "One Health Medicine and Globalisation", "Disease Surveillance and Risk Analysis",

“Research Methodology and Computer Applications”, “Health Economics Policy Monitoring and Evaluation”, “Introduction to Environmental Epidemiology”, “Molecular Epidemiology and Bioinformatics”, “Disease Modelling and Geographical Information System”, “Advanced Statistics” as well as “Methods in Epidemiology”. The second year is again devoted to a research project leading to the Master dissertation.

In their assessment of the curricular structures of both programs are review, the experts find the two Master programs under review to be well-rounded curricula of an international standard, which in their view adequately prepare students to achieve the intended competence profiles and learning outcomes.

Both master programs are organized into two semesters of lectures and 2 semesters for the master thesis. In the discussions with representatives of the student body, the interviewees point to very crowded first two semesters for the taught lecture part. The experts recommend that the Department leadership consider suitable solutions to deal with this perceived overload. A starting point could be to do a workload analysis for both programs as part of the internal QA system of the School and its Departments, which thus far is critically missing.

On a more general note, the experts observe that the two programs under review (plus an additional four Master programs offered by the Department), all have significant thematic overlaps. Before this background and in order to safe resources, the experts recommend thinking about potential options for “streamlining” these curricula while at the same time making them more distinguishable one from the other. One line of action e.g. could be to offer a core curriculum and the diversifying and allowing for specializations/elective in the ensuing part of studies.

The experts identify the following further areas for improvement regarding the curricular structure of the two Master programs:

They recommend a-clearer specification of the individual courses/topics to align them with the two Master's program and their profile.

They furthermore see potential in strengthening the content of the Master's programs by an intensified cooperation with the School of Human Medicine, which is currently represented with only a small percentage in the Master's programs and their strong focus on zoonotic or potentially zoonotic diseases. How does the disease under consideration presents itself in veterinary medicine and human medicine respectively and what are the differences in diagnostics and therapy? Are there preventive measures that can be implemented across the disciplines? These questions in the experts´ eyes could be addressed for all potential diseases from an interdisciplinary point of view.

Furthermore, the cross-sectional areas of psychology should also be considered, as the implementation of prevention measures often has a socio-cultural background and is an important factor for implementation measures in One Health and Tropical Medicine, especially given the national diversity of the students.

Internship

Within the two Master programs under review, an internship is neither compulsory nor an integral part of the curriculum. It does not appear in the module handbook as a separate entity and there are no clear learning outcomes defined for this activity. Students thus far have been doing an internship at best on a voluntary basis in connection with the preparation of their Master thesis.

The experts suggest considering whether the Internship in the Master programs becomes an obligatory, formal, integral part of the curriculum. They see value in providing a clear guidance about internship opportunities and better defining its relevance to thesis and future career of the students. In addition, this would create the opportunity for graduates to position themselves early with regard to future job opportunities. Furthermore, students from different African nations enroll in the two Master's programs, so that the aspect of trans-border work and networking could be clearly supported with university-sponsored internships.

International Mobility

In terms of international mobility, it is incoming mobility, which is the predominant feature of the two Master programs under review. A majority of students, enrolled in the programs, come especially from neighboring countries in the SADC region. There is on the other hand practically no outgoing mobility, not least to the fact, that during the corona crisis not much interaction could be organized even within the University of Zambia.

As the experts do not detect problems concerning the organisation of student mobility and credit transfer, they suspect that a widening of the opportunities for the students and a focused advertisement may be helpful.

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- Website of the ACE Centre

- Rules and regulations prescribed by the Directorate of Research and Graduate Studies of the University of Zambia (https://www.unza.zm)
- Discussions during the audit

Preliminary assessment and analysis of the peers:
On the central University level, it is the Directorate of Research and Graduate Studies of the University of Zambia, which is in charge of the general admission policies and rules.

Requirements that are more specific can be found on the website of the African Center of Excellence (ACEIDHA). Potential applicants of the ***Master of Science in One Health Analytical Epidemiology*** accordingly are eligible:

it they dispose of a Bachelors' degree in Medicine or Veterinary Medicine with at least C+ grade in Epidemiology, Statistics or Community Medicine and A- Level Mathematics. Medical and Veterinary graduates with at least one year of related Medical or Veterinary experience will have an added advantage.

Furthermore, graduates in health-related fields of study such as Statistics, Demography, Food Science and Public Health may apply, provided they are graduates from a recognized University. Candidates with a Bachelors' degree in Biological Sciences and at least two (2) years post-qualifying experience will have an added advantage.

Concerning the ***Master of Science in Tropical Infectious Diseases and Zoonosis*** the admission criteria are presented as follows:

Applicants must be graduate from any recognized University in the field of Biological Sciences, Medicine, Public health, Veterinary Medicine, Environmental Health, Nursing, Food Science, Agricultural Sciences, Social Sciences and any other related field of study. A minimum of credit or two years working experience will be an added advantage. Candidates with observed deficiencies in particular areas will be required to undertake bridging courses.

The experts find that (prospective) students are informed about the requirements and the necessary steps to apply for admission into the programmes. The corresponding rules and regulation are binding and transparent and are based on decrees by the ministry of education and on the university's written regulations. However, they also notice that the information in the written study guides and on the website are not always consistent. As regards the "Master of Science in Tropical Infectious Diseases and Zoonosis" e.g., the course book describes in detail the prerequisites for attending the Master, but this has not been reflected on the corresponding website (Master of Science in Infectious Diseases and Zoonosis | Africa Centre of Excellence for Infectious Diseases of Humans and Animals (ACEIDHA)

(unza.zm)). Here only the following set of requirements are listed: “Bachelor of Veterinary Medicine (BVM) from the University of Zambia or its equivalent from any other recognized University. A minimum of one year of post-qualifying experience. A BSc degree with a credit or better in Biological Sciences of the University of Zambia or any recognized University”. For interested students, the selection criteria are thus not always uniformly recognisable.

The experts are currently lacking the empirical base to confirm that the admission requirements support students in achieving the intended learning outcomes. At this stage, they have not been provided with comprehensive relevant statistical data regarding the standard period of studies, progression rates, GPA averages or “drop-out”-statistics.

Enrolment rates are currently rather low, which might be connected to the fact that the tuition fees are very high for African standards (around 10.000 USD per year) and that Master qualifications have only in recent years been introduced on a broader scale in the country. The “One Health” aspect currently focuses on the Veterinary medicine and very little on the aspect human medicine (see above). In terms of marketing strategy there is thus room for attracting a broader set of applicants both from human and veterinary medicine.

Criterion 1.5 Workload and Credits

Evidence:

- Self-assessment report
- Student and Credit Transfer Policy 22.02. 2022
- Module handbooks for both programs
- Discussions during the audit

Preliminary assessment and analysis of the peers:

As regards the **Master of Science in Tropical Infectious Diseases**, the total notional hours for the program amounts to 2717 hours, the attached (Zambian) credit points to 271.7. The distribution of notional hours will be 1352 in Year 1 and 1365 in year 2, translating into 45,1 and 41,5 ECTS credits respectively. For the Master of Science in One Health Analytical Epidemiology the corresponding numbers are: notional hours XXX, credit points of 274.4. The distribution of notional hours will be 1236 in Year 1 and 1238 in year 2.

Students and lecturers in the interviews confirm that they learn and teach in one and the same course being part of both Master's programs to economize the teaching load. Before

this background, it remains unclear to the experts why e.g. in the course "VMM 7501 Principles of Epidemiology and Biostatistics" 110 notional hours are given with 11 credits for the Master of Science in Tropical Infectious Diseases and Zoonosis and in the same course 134 hours with 13.4 credits for the Master of Science in One Health Analytical Epidemiology.

Overall, it is difficult for the expert group to assess this criterion, as neither on the program level nor in the module handbooks, there is a clear overall estimate regarding the necessary overall time budget nor a distinction between credits given for various forms of supervised studies and self-study time.

The Department also does currently not administer workload surveys to find out about the workload of students in different parts and stages of the programs under review. This is lamentable, as during the interviews with students, a number of them reported that they felt overburdened especially by the study courses in the first two semester that is the so-called "Stage 1 of the programs", before advancing to the research part and the elaboration of the Master thesis. This is particularly aggravating for students, who work to support themselves alongside their studies.

Finally, UNZA and the School for Veterinary Medicine/the Department for Infectious Diseases do not provide statistical data about the pass and progression rates of students, which also would provide evidence for the adequacy or inadequacy of the work load in these two programs. According to a subsequent written statement, the average study period for the two Master programs amounts to an average of 2-2.5 years. Students, who finance themselves, are reported to need an additional semester. This statement cannot be verified with certainty on the basis of the data, as the enrolment numbers are not clear.

As regards the unavailability of a comprehensive set of data, the University of Zambia it a subsequent statement after the on-site review points to the existence of a contract with Astria Learning related to the further development of its student information system and learning management system. UNIZA minutes that unfortunately this contract was terminated prematurely by the University and the contracted party has not been willing to provide all the student information. Thus, only progression rates have been sent regarding the 2021 academic year cohort.

The experts are satisfied with the way the system of academic credits is administered by UNZA and the School of Veterinary Medicine. They do however not understand the ECTS calculations for the two Master program and ask the program coordinator for clarification. This clarification is subsequently provided.

The recognition of credits for incoming and outgoing students is satisfactory regulated in UNZA´s Student and Credit Transfer Policy as of 22.02.2022.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-assessment report
- Course handbooks of the programs under review
- Discussion during the audit

Preliminary assessment and analysis of the peers:
In its Self-Assessment Report, the faculty records that appropriate learning methods and instruments are implemented for both Master programs under review and that the a variety in learning methods and instruments are used.

The most common method of instruction in the past has been face-to-face lectures with an average course size of 12 students in attendance. The number the contact hours for lectures has been set at a total number of 5 including tutorials. As a general rule, Wednesday afternoon has been reserved for seminars. Other forms of student engagement are practical work assignments in the scientific laboratories, tutorials and exercises in the computer labs (with the University providing the software tools according to its own account). It also used to be common practice to go on field trips. The various forms of teaching for each module are anchored in the department´s module descriptions for the two programs under review.

The department takes pride in emphasizing a student centered teaching mode, encouraging active participation of students in the form of interactive discussions, topic presentation, laboratory work, field work, case study, and projects. During the past years, this mode of teaching delivery has however dramatically changed as the University in the suite of the Pandemic switched to online modes of teaching using its Moodle and Astra e-learning platforms in the process (though only half of the courses have been recorded), for which all staff and students have been provided with accounts.

Student exchange with collaborating universities as well as field trips practically came to a standstill, students in the interviews describe that they worked in isolation to a considerable degree. This also has hand an impact on the quality of the Master dissertation. The experts, being provided with a sample of student work, observe that the Master theses of the past two years were rather “theoretical” or “descriptive” in nature. Some of them lacked the empirical foundation, which would usually be one of the results of field trips, all

of which were cancelled during the SARS-CoV-2 crisis. In addition, the funds for doing the research are limited and hence restrict the experimental setup

As regards the work in the computer labs, students are requested to bring their own laptops, with the software and data being provided by the Department and installed on their laptops. Due to the fact, that not all students dispose of new laptops and that no sufficient computer laboratories are available, these arrangements however do not always work.

During the interviews with staff and students, it becomes evident, that the past years have been challenging for all parties involved. This is also evidenced by the fact that a considerable number of students are experiencing delays in their studies and have asked for a prolongation of their stipends, though summative figures for the two Master programs under are not provided to the experts.

As the Department also does not use the instrument of student evaluations for unknown reasons, it is difficult to get a summative overview regarding the overall satisfaction of the student body with regard to the quality of teaching and learning. To have this information available is however of crucial importance to react to student demands and improve the quality of teaching and learning at the institution.

The experts are happy to note, that the module descriptions for both programs clearly state the teaching methods applied in each learning unit and completed with practical instructions for laboratory work, learning materials, and the learning plan and assessment.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 1:

The experts find that the program learning outcomes of both Master programs under review have been appropriately designed and correspond to level 7 of the European Qualification Framework and the Dublin Descriptors. They are equally found to be in alignment with the field specific criteria of the ASIIN Technical Committee for Medicine.

Whereas the two programs are in principle aligned to the needs of the national and regional labor market, there is a need in further substantiating and sharpening the graduate profiles for the two curricula under review. The lack of tracer studies is mentioned as a weakness in the Department´s own SWOT analysis and must quickly be implemented. The buildup of an Alumni Network is recommended.

The experts confirm that major stakeholders are regularly involved in the continuous assessment and further development of the program. The expert team also attests that the module/course descriptions include the learning outcomes of each individual learning unit

and appreciate the matching exercise demonstrating how the individual modules contribute to the attainment of the overarching PLO´s.

The experts find the two Master programs under review to be well-conceived and of an international standard, adequately preparing graduates to achieve the intended learning outcomes. At the same time, they identify a considerable overlap among the two and altogether six Master programs of the School and recommend considering alternative curricular structures along the lines described in the sections above.

The experts suggest that for the two Master programs an internship becomes an obligatory, formal and integral part of the curriculum. They see value in providing a clear guidance regarding internship opportunities and better defining its relevance for the elaboration of a thesis and for the future career of graduates.

Processes and Regulations are in place to organized student and staff mobility. In practical terms, incoming and outgoing mobility is however limited. The experts recommend that the School designs new strategies to foster student mobility.

The expert panel considers the admission requirements and procedures for the two programs under review to be binding and transparently published on the webpage. There is however a lack of consistency in various documents, which need to be cleared up.

Data, to find out whether students are in principle able to successfully graduate on time, are available only to a limited degree. It should be taken into account that, due to the high course fees, students who have to earn a living must also be included. Lessons from the SARS-CoV-2 pandemic, especially from the digitalization of teaching, should be included here as future teaching and learning opportunities. Corresponding structures have been created and should be further utilized.

The Department needs to implement survey to find out about the adequacy of its workload calculations as students raised concern with all courses/exams compressed in the first two semester resulting in a potential overload and in some instances prohibiting their articulations into the second part of their studies (being devoted to the execution of their research-based Master thesis).

The experts acknowledge that the teaching staff applies a variety of teaching methods and didactic means to promote achieving the learning outcomes and support student-centered learning and teaching. They see however a need for the introduction of teacher evaluations by students to get a feedback, how satisfied students are with teaching and learning at the institution and its underlying didactical concepts.

2. Exams: System, Concept and Organization

Criterion 2 Exams: System, concept and organization

Evidence:

- Self-Assessment Report
- Examination Regulations for postgraduate studies of the University of Zambia of 2015.
- Module descriptions
- Samples of student's work (projects, exams and thesis)

Preliminary assessment and analysis of the peers:

Examinations within the Schools of Veterinary Medicine and its Departments for Disease Control are conducted in conformity with the University of Zambia´s examination regulations for postgraduate studies of March 2015. The University of Zambia operates a two-term/semester system with all half-year courses examined at the end of the term in which they are offered and full courses at the end of the study year/second term.

The methods and criteria for course assessment as well as the relative weights of the components are stipulated in the individual courses/modules. By registering for a course/module, a student enters him/herself for examination in that course/module and will have to pay an examination fee. In order to qualify for a final grade in a course from the respective examiners, a student has to satisfy the stipulated attendance requirements and to complete and present for assessment all work defined for the course within defined deadlines. The Directorate of Research and Graduate Studies, which defines the examination dates in collaboration with the Departments and Schools, organizes the examinations. Normally all coursework examinations take place at the end of the academic year, unless the Board of Graduate Studies approves having the examinations at other times.

As regards the grading system, the University of Zambia is using the A (Upper and lower distinction) to F (definite fail) grading scale. Grade C (definite pass, bare pass) constitutes the pass threshold for all courses/modules. The Head of Department is responsible for submitting the grades to the School's Assistant Dean for Postgraduate Studies for consideration by the appropriate School Postgraduate Studies Committee. The Committee in turn reports to the Board of Graduate Studies within the stipulated deadlines.

The examination system accordingly relies on a **system of uniform continuous assessment** consisting of written tests (minimum two with a weight of 20%), assignments (minimum of

two with a weight of 10%) and finally a field trip/laboratory reports (contributing 10%). On the other hand, the **final examination** contributes 60% percent (written examinations (theory) with 40%, the practical Examination with 20%)

As regards the **Master of Science in Tropical Infectious Diseases and Zoonosis,** students in their first term/semester will have to pass exams in five half-year courses and (part) of one full year course. The second term comprises four half-year courses (and the second part of the full year course). No student will be permitted to proceed unless she /he has passed these exams in "part 1" of their Master study. The second academic year (labelled "part 2") comprises one full course as well as supervised research culminating in a Master dissertation. During this period of study, the Master students regularly meet with their assigned supervisors to discuss and document the progress made. The manuscript will be submitted for possible publication. Three internal examiners are to be appointed as members of the board of examiners for examination of the dissertation.

The **Master of Science in One Health Analytical Epidemiology** essentially features the same number of courses and corresponding examinations.

The University of Zambia and the School of Veterinary Medicine routinely apply a plagiarism check on the Master thesis. Students who commit plagiarism will be given a sanction defined in a catalogue of penalties for (academic) misbehavior.

During the discussions with a number of national and international students of both programs, the experts learn that they are in general rather satisfied with the organization and conduct of the exams as well as the grading system, with one notable exceptions:

This concern is raised by students who are enrolled in "half courses" together with students from parallel running Master study programs who take the same course, but in the version of a "full course". The students of half courses in this case will not receive their grades until the completion of the full course of their fellow students. This in practical terms means that there is a delay of several months before their exams are graded. This according to the experts´ opinion is not acceptable and needs to change.

The experts note that the University currently does not have special regulations for students with disabilities. According to the proposed plan, these are included in the School´s admission policy, which is yet to be approved. The representatives of the University argue, that students with disabilities, which are reportedly identified in the application stage, in practice get special treatment.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2:

In their overall assessment of this criterion, the expert group finds that Department reportedly uses a variety of assessment types including written, quizzes, tests, reports as well as practical lab assignments, project reports, presentations and oral exams. Appropriate rules and regulations, which govern the examination systems university-wide, are in place. These rules and regulations are adequately communicated and transparently published. The students confirm during the interviews that they are informed about the examination schedule, the examination form and the rules for grading.

The experts during the visit have a chance to review a sample of Master theses and a sample of exams for both program under review and consider them to be of adequate substance.

Examination regulations are found to be fair and non-discriminatory, in-line with the LO and the teaching methods, with appropriate assessment rubrics defined. The Department disposes of disciplinary procedures safeguarding academic integrity and guarding against the misuse of intellectual property in the conduct of examination.

The number and distribution of exams with all taught courses being compressed in the first two semesters mean what students have an over-proportionally high workload in the first two semesters with not always sufficient time for preparation according to their account. The corresponding recommendation of the expert can be found under criterion 2 “Curricula”.

In the discussion with the students, it furthermore turns out, that there is a wider spread problem regarding the grading time for half courses, in which students have at times to wait for several months before receiving their final grade. A suitable solution for this ongoing problem needs to be found, but in its response subsequent to the on-site review the Department indicates that is working with the central administration to find suitable solutions.

3. Resources

Criterion 3.1 HR Resources, Staff Development and Student Support

Evidence:

- Self-assessment report
- Staff handbook

- Workload Policy and Procedure as of 2019
- Discussion during the audit

Preliminary assessment and analysis of the peers:
HR Resources

As regards the Human Resources available for the programs under review, the School of Veterinary Sciences submits as part of the self-documentation a detailed staff handbook, indicating the number and qualification level of its teaching personnel.

According to the figures provided, there are currently 41 staff members. Given the comparatively small number of Master students in the two programs under reviews, this provides for a very favorable student-staff ratio. Almost all of lecturers dispose of a doctoral degree. The size of the staff body limits the need for hiring part-time of adjunct staff. The University of Zambia also disposes of a merit-based recruitment system, which allows recruiting, retaining, promoting and developing its academic staff. Staff entertains important collaborative links with other instrumental organizations like the Zambia Wildlife Authority, the University Teaching Hospital, the Centre for Disease Control-(Chest laboratory), the Central Veterinary Research Institute, Golden Valley Agriculture Research Trust and other organizations.

The University also has in place a “Workload Policy and Procedure” as of 2019. This policy aspires to provide a fair, transparent and effective framework for the allocation and distribution of academic workload of its staff. In its own review, this policy is classified as a significant change in the way, workload is considered and distributed, taking into consideration teaching, research, community service and consultancy as the three primary components of an academic staff´s workload and trying to cater more for the various strengths and interests of individual staff members.

In their appreciation of HR quality, the ASIIN expert group is satisfied with the quantity and qualification level of staff. They attest that the professors and lecturers are well qualified, generally have a good publication record and are engaged in research. The experts observe that staff of the School of Veterinary Medicine and the Department of Disease control significantly contributes to scholarly research in the areas of Emerging and Re-emerging/ Infectious Diseases, Epidemiology, Public Health, Environmental Toxicology, Preventive Medicine, Economics, Jurisprudence and others. There is evidence regarding a satisfactory collaboration with enterprises and public authorities. The experts nevertheless see especially a huge additional potential regarding the engagement of staff in the emerging National One Health Strategic Plan, which has been already mentioned in other parts of this report.

Job Conditions and Performance Review of Staff

Conditions for recruiting and retaining academic and technical staff have not always been favorable in Zambia and the University of Zambia. In the past, a lack of financial resources, "government wage freezes" and irregular salary payments contributed to deteriorating retention numbers. In the past couple of years, however, the University has reportedly managed to hire more permanent staff providing a heightened sense of job security. It also has been possible to raise salaries and pension benefits in cooperation with the lecturers unions and to provide other incentives in terms of accommodation, office space, training measures and further education etc.

The University engages according to its own account engages in regular performance review of its staff on an annual basis against set work plans. The results are used to assist in staff development and to react in case of below par performance. The Department does not use teacher evaluations of students as an important feedback mechanism (also described in the Universities´ QA manual) to appraise a lecturer´s performance.

HR Development

As regards the **aspect of staff development**, it falls under the jurisdiction of the Registrar's Staff Development Office. This unit is in charge of providing administrative support to the University of Zambia Staff Development Program, which was established already back in 1969 as a vehicle for beefing up the human resource base for the University. This is accomplished by providing training awards/fellowships to Zambian members of staff enabling them to obtain further academic and other qualifications. The University also supports lecturers on a regular basis for attending conferences, assists in the publication in research journals etc. While lecturers in the discussions with the expert team confirm that a range of options for professional development are available them, the experts simultaneously get the feedback, that staff development programs are not always well advertised and that a considerable number of lecturers are not fully aware of the offers in place. The possibility to profit from these offers also depends on the position and the subject. Teachers, who also have to do clinical work, seemed to be much more burdened than those who only work theoretically, and thus not less likely to profit from supporting measures.

The experts acknowledge that various opportunities for continuous professional development are provided. They commend the School of Veterinary Medicine for its mandatory educational training for new academic staff that encompasses curriculum design, teaching material, and innovative teaching and learning methods. Moreover, at the beginning of each semester, workshops are organized refreshing and deepening didactic competences by the Institute for Learning Development and Quality Assurance.

The experts nevertheless take note of the fact, that teaching staff are not equally aware of the opportunities on offer and that a more proactive advertisement is warranted. The interviewed staff also would appreciate more tailor-made professional development courses to assist them in writing adequate research papers to place them in indexed journals or successfully applying for international research projects.

In terms of the overall system of evaluation of teaching and research promotion as well as career advancement, the experts understand the current system is based on an institutionally implemented mix of support and control with limited room for personalized development. The experts see value in institutionalizing more individual short and mid-term development plans for each individual staff member.

Support and assistance for students

The University and the Faculty have implemented a series of instruments supporting students in the learning process and monitoring their success in reaching academic the assigned learning outcomes of both programs.

A broad range of support services such as psychological support, health services, financial assistance etc. In their interviews with the expert team, students are generally happy with the level of support they receive. They criticize however that the number of stipends reportedly has been considerably reduced in recent past.

Criterion 3.2 Funds and equipment

Evidence:

- Self-assessment report
- Discussion during the audit

Preliminary assessment and analysis of the peers:
As regards the **financial situation and perspectives** for the two Master programs (as well as for all other newly developed Master programs) under review, they profit from the fact, that they have been part of the World Bank project for the development of the African Center for Excellence ACEIDHA during the past five year.

ACEIDHA, which is an integral part of the School of Veterinary Medicine, thus receives financial support amounting to USD 173,153 per annum according to the information provided. Additional income is generated by the considerable tuition feeds charge for international as well as national students and amounting to around USD 10,000 per stu-

dent. These fees are collected from a comparatively small number of (primarily international African) students, who frequently are studying on a stipend. Other third party income is limited.

It is important to note, that the first funding phase of the World Bank is ending at the end of this year. The School is currently preparing the application for a second funding phase of five years; one of the prerequisite is the successful implementation of this international accreditation review. The experts ask for at least a midterm financial budget overview for the School and its programs, but learn that such a financial forecast has not been executed thus far. The experts see value in having this financial plan in place, accommodating for the eventuality that the World Bank funding will not continue. They also strongly recommend thoroughly investigating the (financial) potential linked to the brand new inter-ministerial Zambian "National One Health Strategic Plan", which will be implemented in the next couple of years. In the discussions with interview partners being part of the National Plan, it becomes evident to all parties present that there are unique opportunities available for third party funding and for synergies operating, from which the School and the two programs under review should profit form.

Regarding the **state of physical infrastructure**, the following facilities are available for teaching, learning and research according to the information provided in the Self-Assessment Report:

Seven lecturer rooms can be used with a capacity of 50 students (two of them can host 70 and 120 respectively) and all the main Vet Lecture theatre with a capacity of up to 220. There are also four smaller seminar/tutorial rooms available with a capacity for 15 students. In terms of computer laboratories, the Self-Assessment Report mentions that there is one available with a capacity for up to 16 Master students, with a number of software programs operating. During the guided tour across the Campus, the experts are not able to confirm that such as computer lab exists. There however take note of plans to have a modern computer lab one in the new research and teaching building under construction, but is not ready yet and it unfortunately misses all electricity lines up to now, because it was forgotten in the planning phase.

In addition to the main University Library, the School of Veterinary Medicine also has a library with adequate books and other online materials adequate for all the students. The School of Veterinary Medicine is using a Moodle E-learning platform for Teaching and Learning Support:

As regards the available **laboratories**, the Department of Disease Control is one of the four academic Departments in the School of Veterinary Medicine with the following main stream laboratories: Virology, Bacteriology, Public Health, Biochemistry, Pathology

and Haematology/Parasitology. In addition, the Department has a Biohazard facility containment level 2 where infectious materials are handled. In 2008, a Biosafety Level-3 laboratory facility was constructed by the Centre for Zoonosis Control project of the Hokkaido University, Japan. The program representatives argue, that this modern facility has greatly improved the capacity of the Department to engage in research work involving various pathogens and also provides service to the Ministry of Agriculture and Cooperatives, the Ministry of Health and other related and line Ministries such as Tourism and Arts under the Department of National Parks and Wildlife Services.

The experts positively note the construction of a new modern teaching and research building with the assistance of World Bank Funding. The expert group has a chance to see the existing facilities as well as the shell construction of this new building, which in the future should improve the available infrastructure. They conclude that they con grano salis constitute a satisfactory basis for the execution of the two Master programs under review. They however identify the following areas of improvement to be addressed:

As regards the computer facilities, they needs to be further investments, as computers are indispensable for a range of courses offered. Students frequently do not dispose of appropriate personal computers, which is critical especially for studying successfully in courses such as bio-information, modelling or geo information systems.

Regarding the current practice of using one and the same laboratory for the purpose of student training as well as for scientific diagnostics, the experts find that this does not constitute good international standard (not in line with GLP- Good Laboratory Practice) and request that this concern is adequately addressed.

The combined use of the laboratories currently enables the use of new laboratory equipment such as ilumnia, nucleic acid extractors, quantitative PCR and next generation sequencing for students as well. Without this possibility, the necessary resources for training with modern laboratory diagnostics would not be available. As soon as possible however, dedicated laboratory space should be opened for students only. According to current knowledge, this will be clearly addressed as a goal when the new building is introduced, but attention should be paid here above all to ensuring that appropriate laboratory equipment is available.

In the discussions with staff, the general feedback can be summarized as follows: it is generally accepted the equipment and resources available are satisfying a minimum standard for the implementation of programs. Many lecturers are however missing advanced equipment for diversifying research interests and put high hopes into the new

constructions. As for the experts, they are impressed by the capacity of staff to improvise under sometimes scares resources.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 3:

In conclusion, the expert panel recognizes a strong identification of the teaching staff with their institution. The composition, professional orientation and qualification of the teaching staff are sufficient for successfully delivering the two degree programs under review. Concerning the professional development of its staff, there is a range of opportunities available. The induction program for new staff is commendable.

The experts find that sufficient financial means are currently available to secure the funding of the two programs under review. The experts nevertheless see a need for a short and mid-term financial plan in place, accommodating for the eventuality that the World Bank funding will not continue. They also strongly recommend thoroughly investigating the (financial) potential linked to the brand new inter-ministerial Zambian “National One Health Strategic Plan”, which will be implemented in the next couple of years.

As regards the physical infrastructure, they needs to be further investments in computer facilities, as they are indispensable for a range of courses offered in the two Master programs under review. Students frequently do not dis-pose of appropriate personal computers, which is critical especially for studying successfully in courses such as bio- information, modelling and GIS.

Regarding the current practice of using one and the same laboratory for the purpose of student training as well as for scientific diagnostics, the experts find that this does not constitute good international standard and request that this concern is adequately addressed.

Con grano salis, the equipment and resources available are satisfying a minimum standard for the implementation of the two programs provided that the investments into the new teaching and research building materialize in the near future. Many lecturers are awaiting advanced equipment for diversifying research interests and put high hopes into the new constructions. Students equally ask getting access to more advanced equipment such as quantitative PCR, Illumina Sequencer etc. The expert team before this background expects receiving proof of the operation of the new building and an inventory of the investments in new equipment made.I

[…]

4. Transparency and documentation

Criterion 4.1 Module descriptions

Evidence:

- Self-assessment report
- Homepage of the program
- Discussion during the audit

Preliminary assessment and analysis of the peers:
During the onsite visit at the School of Veterinary Medicine, the experts on request are provided as integral part of the SAR with the module/course handbooks for both Master programs under review. They contain information about the persons responsible for each module, the intended learning outcomes, the teaching methods and workload, the credit points awarded, the examination requirements, the forms of assessment and details explaining how the final grade is calculated and a summative list of recommended reading material.

The experts are content with the information provided to them. It is however not clear, whether this information is contained in a separate documents, made available to all stakeholders and published appropriately and whether this document is handed to the students at the commencement of their studies. Students in the discussions denied having access to this document. Therefore, there is need for proper guidance to students as in how and where they can find this document.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-assessment report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

According to the information provided by the School of Veterinary medicine and its Department for Disease control, students of both Master programs, who have satisfied all requirements, upon graduation receive a diploma certificate, which is conferred at the graduation ceremony of the University.

In addition, they also receive as an academic transcript signed by the Board of Graduate Studies, containing the final marks of all the modules at the end of each study year. The

Transcript of Records lists the administrative acronyms of the courses that the graduate has completed, as well as the grades. The experts note, that the information provided is not sufficient for "third parties", as the name and content of the programs are nor clearly marked, there is also no cumulative GPA visible on the Transcript.

The experts are of the opinion, that the informative value of the graduation documents must be increased. The graduates are entitled to receive documents with meaningful information regarding the programs, the learning outcomes, a list with the full names of the courses taken, a cumulative GPA etc. As regards the so-called Diploma Supplement, no such document is currently available for the graduates of both Master programs, which needs to be corrected in order to comply with the ASIIN requirements. The Diploma Supplement is the most important instrument for international academic and professional mobility of students and graduates in all of Europe and beyond.

Criterion 4.3 Relevant rules

Evidence:

- Self-assessment report
- Regulations for Post Graduate Training as of March 2015
- Discussion during the audit

Preliminary assessment and analysis of the peers:
The University of Zambia has passed University wide rules and regulations for Postgraduate Training in March of 2018. The document contains relevant information regarding the general application and admission process, the enrolment rules, further information on assessment and grading as well as the requirements for the preparation of a Master dissertation and can be found with some effort on the website of the University of Zambia.

On the level of School of Veterinary Sciences and the Department of Disease Control however, little additional information is available. In preparation for the review, the ASIIN experts had accessed the website of the School of Veterinary Medicine and its department of Disease Control to learn more facts about the programs under review and vital information relevant to the student learning cycle. The experts also attempted to research further background information regarding the website of the African Centre of Excellence for infectious diseases of humans and animals (ACEIDHA), which after all has been financed by the World

Bank for the past five year. At the time of the audit, the information found was only rudimentary; little was to be learned regarding the origin and purposes of the ACE-centre and its function for the two programs under review.

The expert team identified essential pieces of information regarding admission policies and the tuition structure for the different modes of study and a link for the online registration. Almost nothing however could be identified regarding the core information for both study programs, e.g. the program learning outcomes, the envisaged graduate profiles and especially a student handbook summarizing the most important information for incoming students.

This is lamentable on various accounts. On the one hand, it is a requirement of the World Bank itself, which demands transparent and comprehensive public information about the scope and results of its investment in the African Centre of Excellence. The obligation to submit regularly progress reports to the donor in no way can be considered a substitute for corresponding information in the Universities own public domain. Apart from the World Bank policies, it is foremost the ASIIN accreditation criteria, which are not met. They require that relevant stakeholder, prospective as well as enrolled students and their parents, lecturers as well as representatives of the employer side, are guaranteed access to the vital information cited above.

In the interviews, it becomes apparent, that some of the missing information is available but that due to a lack of personal resources and partly due to the Corona crisis, the two websites have not been updated in recent years. As regards the important information tool of a student handbook containing all relevant information for the two programs under review, the expert team is informed that these documents are reportedly in the final stage of development and are to be published shortly. As the two programs are up and running, the publication of these documents and the update of the two websites in question must have high priority.

The experts also see value in providing a more stringent orientation program for incoming Master students. This would contribute informing them more adequately about the regulation of provisions for general affairs, students, curriculum structure, lectures, completion of the study, and study leave, academic facilities, evaluation of learning achievement, academic norms, transfer of study programs, graduation criteria, higher education transfer, the continuation of study, and academic administration and sanctions. This certainly would also benefit international students, who constitute the vast majority of enrolments in the two Master programs under review.

The experts also recommend publishing the rules for disability-friendly education services. They should comprise standards for academic services for students with disabilities, the

standard for facilities and infrastructure, the standard for learning, and the standard for administration.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 4:

The experts confirm that on the university level, the regulations for postgraduate studies as regards the application and admission process, the examination process and the requirements for the Master dissertation are in place.

They nevertheless see room for improvement in a number of areas: they take note of the announcement of the School of Veterinary Sciences that the long awaited Student Handbook with more specific information regarding the Master programs has not been published and handed to incoming students at the time of the audit.

On a more general level, they see a need for further updating the website of the Schools and its Departments for Disease Control as well as particularly for the African Excellence Centre. In the aftermath of the audit, the University has informed the expert team however, that a new website has been launched. The experts see indeed considerable improvements but recommend taking the information contained in this report as a yardstick further upgrading the information.

The rules and regulations for disabled students also need to be transparently published.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-assessment report
- Quality Assurance Policies and Manual of the University of Zambia
- Discussion during the audit

Preliminary assessment and analysis of the peers:

The University of Zambia, its Department of Disease Control and the School of Veterinary Medicine present a comprehensive system of external as well as internal QA policies and

procedures in line with the University motto “Service and Excellence”. A central cornerstone of its IQA system has been the development of it QA manual back in 2018, which contains the most important elements of a modern higher education QA system.

The experts learn that in preparation of the ASIIN accreditation, the Department has commissioned an internal mock audit, assessing and measuring the satisfaction of its stakeholder with the programs under review. According to its own analysis, stakeholders are highly satisfied with the outputs of these educational offerings. In its summary, the department finds that it disposes of well-structured curricula in line with stakeholder expectations, adequate and highly trained human resources as well as sufficient infrastructure and facilities. The maintenance of the equipment, the lack of adequate refresher training especially for technical staff and the absence of tracer studies are cited as areas of improvement.

In terms of external QA, it is worth mentioning that both programs have recently undergone the obligatory national accreditation procedure of the Zambian Higher Education Authority, obtaining the accreditation in the process. Apart from the formal notification, there is however no published accreditation report available, which would inform about the major strengths and shortcomings

Another form of external QA comes via the monitoring system of the World Bank, which in the past couple of year has funded the African Center of Excellence in Disease Control. The center is financed via a Program for Results (PforR) operation whereby specific contracts or expenditures are not financed directly but rather, they finance results. The PforR approach focuses on supporting ACEIDHA in achieving sustainable development results, strengthening institutional capacity, and enhancing the effectiveness and efficiency of its programs. Disbursements are made on the achievement of results that are specified by the operation’s Disbursement Linked Indicators (DLIs). To achieve the results of the PforR Program, ACEIDHA undertakes activities and actions identified in its implementation plan and actualized in its annual work plans.

Another important feature is a system of External Examiners, which has been introduced for the Universities postgraduate programs. These external experts are contracted every two years during the final examination weeks. The findings of this form of external are summarized in a written record and made available to the School Postgraduate Studies Committee. A sample of these written reports are made available to the ASIIN expert team.

In its appreciation of the state of the department´s QA system, the expert team finds that in a number of areas such as the regular review of the curricula or the appreciation of research output there are well-designed QA policies and a well-written QA handbook in place. The experts are also able to identify a number of best practice examples. They commend

the department for creating a so called “grievance website”, which can be used by students to note in which areas their expectations have not been met or where corrective action is deemed necessary. Another commendable feature is related to the possibility for students to change the supervisor if they are not satisfied with the support provided to them. Both features in the expert´s eyes could also implemented for other programs at the School. The expert team also commends the Department of Disease Control and its School of Veterinary Medicine for establishing a system of external examiner for the two study (and all other postgraduate) under review. Finally, the experts appreciate that the department has made an effort to execute a SWOT analysis in order to cope with self-perceived weaknesses, to expand on the strengths and to capitalizing on the opportunities of the program.

Having come to these positive finding, the expert team also notes that a considerable number of the instruments described in the QA manual have not been implemented in the past couple of years. The experts acknowledge that the Corona crises might have had a negative impact in that regard but argue that this cannot serve as an excuse for the lack of implementation, rather the opposite, as the Pandemic has increased the need for a sound QA system.

The lack of implementation of vital QA instruments not only applies to the regular conduct of formal tracer studies obtaining a clearer picture of how successful graduates are in the job market. By the same token, thus far no systematic feedback from employer satisfaction surveys is collected checking to which extent graduates have the right mix of general and technical skills required for their work environment. Also the involvement of alumni as supporters and ambassadors needs to be systematized and their opinion regarding the programs used for their further development. Another valuable improvement tool, teacher evaluations by students, is adequately described in the handbook, but has not been implemented as has not been general student satisfaction survey. Finally, no reliable information has been generated regarding important Key Performance Indicators such as the achievement of graduates, their standard period of study or graduation rates. Also, there has been no systematic work load evaluations of students to find out where potential bottlenecks in the course of studies are located.

The experts see overall a need to more systematically implement a full PDCA quality cycle, emphasizing not only the “planning” and doing” but especially the “checking” (KPIs) and (corrective) “actions”, thus closing the QA circles at hand. .

Overall, the expert panel get a mixed impression of the quality assurance system for the programs under review. While on a formal level, policies and procedures are adequately described and in some areas well implemented, other elements currently are either not implemented or nor used for the continuous development of the programs under review.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 5:

The expert panel commends the University of Zambia for compiling a comprehensive Quality Assurance handbook in line with modern standards. While certain elements of its QA procedures such as its grievance policies are of an advanced nature and can be considered best practice, other important elements such as students and employer surveys as well as tracer studies have not been implemented in the past couple of year in spite of being adequately described in the manual. In its response to the expert´s draft report, the QA department reports that in contrast to the information in its SAR, a system of teacher evaluations by students has been set up and questionnaire has been sent to the students. However, no adequate responses from the student has been received as of now, it remains work in progress. Subsequent to the on-site review, the University also reports that tracer studies are in the making and that the system will be implemented with students who graduated in 2023.

The collection of pivotal Key Performance Indicators remains a challenge still to be tackled. These data are of crucial important for the further development of the programs and a prerequisite to adequately monitor student progression. A comprehensive quality assurance culture still needs to be further developed and quality circles closed. They also point to the need that results and any measures derived from the various quality assurance instruments used (various survey formats, student statistics, etc.) have to be communicated proactively to the students and other stakeholders in a systematic way.

D Additional Documents

No additional documents are needed.

E Comment of the Higher Education Institution (05.06.2023)

UNZA in its written comments on the expert´s draft report dating 5 June 2023 provides a number of clarifications, comments and additional information, which have been inserted in this report and have been weighed into the experts findings.

F Summary: Peer recommendations (07.06.2023)

Taking into account the additional information and the comments given by the University of Zambia, the experts summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ma One Health Analytical Epidemiology	With requirements for one year	-	30.09.2028
Ma Tropical Infectious Diseases and Zoonosis	With requirements for one year	-	30.09.2028

Requirements for both programmes

A 1. (ASIIN 1.1) Develop graduate profiles guiding students with regard to their future employment and provide evidence on the implementation of tracer studies.

A 2. (ASIIN 1.5) Clarify in public documentation, how many credit points are needed for graduation and avoid that different ECTS calculations are used for the same course in different programs.

A 3. (ASIIN 1.4) Advertise the tenders for financial sponsorships with more advance time to allow all students to apply and not miss the calls.

A 4. (ASIIN 4.3) Introduce a formal orientation for newly enrolled students, in order to reverse the trend of increasing standard periods of study and decreasing graduation rates.

A 5. (ASIIN 2) Revise the examination rules avoiding late grading of mid-term exams.

A 6. (ASIIN 4.3) Publish and implement rules and regulations for disabled students.

A 7. (ASIIN 3.2) Change the practice of using the same laboratory for student training as well as for scientific diagnostics, as this is not in line with international GLP- Good Laboratory Practice standards.

A 8. (ASIIN 3.2) Invest in computer labs, as students frequently do not dispose of appropriate personal computers which is critical for a broad range of courses in the two Master's programs.

A 9. (ASIIN 4.3) Finalize, publish, and make available a comprehensive students' handbook.

A 10. (ASIIN 4.2) Update and complete the information in the Transcript of Records. Develop and hand out a Diploma Supplement to all graduates.

A 11. (ASIIN 5) Implement the various features of the QA system in place along the lines described in this report (students' evaluations of teachers; tracer studies; evaluations by employers; collecting reliable information regarding the achievement of graduates, average period of study, graduation rates etc.).

Requirements for the Master in Tropical Infectious Diseases and Zoonosis

A 12. (ASIIN 1.4) The admission requirement must clearly stipulate that next to veterinary Bachelor students also medical students can apply for the program preventing that prospective students might be deterred to enrol.

Recommendations for both programmes

E 1. (ASIIN 5) It is recommended to align the further development of the two (and all other) programs in the department with the new National One Health Strategic Plan of Zambia, using manifold synergies in the process.

E 2. (ASIIN 1.3) It is recommended to develop alternative models of curricula along the lines described in this report given the fact that there are six Master programs in place with a considerable amount of overlap.

E 3. (ASIIN 1.3) It is recommended to provide clear guidance about internship opportunities and to better define their relevance for the students' career perspectives.

E 4. (ASIIN 1.6) It is recommended to strengthen interactive, student-centred learning while fostering critical thinking capacities.

E 5. (ASIIN 3.1) It is recommended to institutionalize individual short and mid-term career development plans for each individual staff member and to find a better balance between teaching, research, and community service obligations.

E 6. (ASIIN 3.1) It is recommended to provide more specialized continuous professional development courses.

E 7. (ASIIN 3.2) It is recommended to develop a midterm financial plan for the sustainability of the Master's programs under review, connecting to the emerging National Zambian Strategy in One Health.

G Comment of the Technical Committee 14 - Medicine (13.06.2023)

Assessment and analysis for the award of the ASIIN seal:

This is a difficult accreditation process where much of the information and documentation that would otherwise have been available was not initially available and it became clear that the university has no experience in international accreditation. Analogous to the process in Uganda, which the Technical Committee discussed in March, this involves two degree programmes that are co-financed by the World Bank.

A total of 12 requirements are proposed regarding the conversion of credits to ECTS points, module descriptions, program documents, graduate profile, examination regulations, technical equipment and quality assurance procedures. In addition, seven recommendations are proposed. After discussion about the procedure and the unusually large number of requirements and their wording, the TC agrees with the assessment of the expert group. The TC just suggest to cancel the word “scientific” in A7.

The Technical Committee 14 – Medicine recommends the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ma One Health Analytical Epidemiology	With requirements for one year	-	30.09.2028
Ma Tropical Infectious Diseases and Zoonosis	With requirements for one year	-	30.09.2028

H Decision of the Accreditation Commission (23.06.2023)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The AC discusses the procedure, especially the funding from the World Bank, the deficits of the facilities and the administration as well as the dedication and high qualification of the teaching staff. In summary, the AC decides to follow the suggestions of the experts and the TC 14 – Medicine.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ma One Health Analytical Epidemiology	With requirements for one year	-	30.09.2028
Ma Tropical Infectious Diseases and Zoonosis	With requirements for one year	-	30.09.2028

Requirements for both programmes

A 1. (ASIIN 1.1) Develop graduate profiles guiding students with regard to their future employment and provide evidence on the implementation of tracer studies.

A 2. (ASIIN 1.5) Clarify in public documentation, how many credit points are needed for graduation and avoid that different ECTS calculations are used for the same course in different programs.

A 3. (ASIIN 1.4) Advertise the tenders for financial sponsorships with more advance time to allow all students to apply and not miss the calls.

A 4. (ASIIN 4.3) Introduce a formal orientation for newly enrolled students, in order to reverse the trend of increasing standard periods of study and decreasing graduation rates.

A 5. (ASIIN 2) Revise the examination rules avoiding late grading of mid-term exams.

A 6. (ASIIN 4.3) Publish and implement rules and regulations for disabled students.

A 7. (ASIIN 3.2) Change the practice of using the same laboratory for student training as well as for diagnostics, as this is not in line with international GLP- Good Laboratory Practice standards.

A 8. (ASIIN 3.2) Invest in computer labs, as students frequently do not dispose of appropriate personal computers which is critical for a broad range of courses in the two Master's programs.

A 9. (ASIIN 4.3) Finalize, publish, and make available a comprehensive students' handbook.

A 10. (ASIIN 4.2) Update and complete the information in the Transcript of Records. Develop and hand out a Diploma Supplement to all graduates.

A 11. (ASIIN 5) Implement the various features of the QA system in place along the lines described in this report (students' evaluations of teachers; tracer studies; evaluations by employers; collecting reliable information regarding the achievement of graduates, average period of study, graduation rates etc.).

Requirements for the Master in Tropical Infectious Diseases and Zoonosis

A 12. (ASIIN 1.4) The admission requirement must clearly stipulate that next to veterinary Bachelor students also medical students can apply for the program preventing that prospective students might be deterred to enrol.

Recommendations for both programmes

E 1. (ASIIN 5) It is recommended to align the further development of the two (and all other) programs in the department with the new National One Health Strategic Plan of Zambia, using manifold synergies in the process.

E 2. (ASIIN 1.3) It is recommended to develop alternative models of curricula along the lines described in this report given the fact that there are six Master programs in place with a considerable amount of overlap.

E 3. (ASIIN 1.3) It is recommended to provide clear guidance about internship opportunities and to better define their relevance for the students' career perspectives.

E 4. (ASIIN 1.6) It is recommended to strengthen interactive, student-centred learning while fostering critical thinking capacities.

E 5. (ASIIN 3.1) It is recommended to institutionalize individual short and mid-term career development plans for each individual staff member and to find a better balance between teaching, research, and community service obligations.

E 6. (ASIIN 3.1) It is recommended to provide more specialized continuous professional development courses.

E 7. (ASIIN 3.2) It is recommended to develop a midterm financial plan for the sustainability of the Master's programs under review, connecting to the emerging National Zambian Strategy in One Health.

I Fulfilment of Requirements (28.06.2024)

Analysis of the experts and the Technical Committee 14 – Medicine (04.06.2024)

Requirements

For both degree programmes

A 1. (ASIIN 1.1) Develop graduate profiles guiding students with regard to their future employment and provide evidence on the implementation of tracer studies.

Initial Treatment	
Peers	not fulfilled Justification: So far, no graduate profiles have been developed. However, the university states that it wants to create the profiles based taking the results of a newly implemented tracer study into account.
TC 14	not fulfilled unanimously: Justification: The TC follows the assessment of the auditors.

A 2. (ASIIN 1.5) Clarify in public documentation, how many credit points are needed for graduation and avoid that different ECTS calculations are used for the same course in different programs.

Initial Treatment	
Peers	Not fulfilled Justification: On the websites of the study programmes, there is no published information on credit numbers and ECTS calculations to be found. Also, no curriculum documents or handbooks are provided for download. However, the documentation provided to the peers by the university contains the number of credits for the programme and each course.
TC 14	Not fulfilled Justification: The TC follows the assessment of the auditors.

A 3. (ASIIN 1.4) Advertise the tenders for financial sponsorships with more advance time to allow all students to apply and not miss the calls.

Initial Treatment	
Peers	Not fulfilled Justification: The university states to have altered the process which appears reasonable. However, no documentation or proof has been provided.
TC 14	not fulfilled Justification: The TC follows the assessment of the auditors.

A 4. (ASIIN 4.3) Introduce a formal orientation for newly enrolled students, in order to reverse the trend of increasing standard periods of study and decreasing graduation rates.

Initial Treatment	
Peers	Not fulfilled unanimously Justification: The university states that a formal orientation was introduced for the 2024 cohort, which seems reasonable. However, the evidence provided was not clear.
TC 14	not fulfilled unanimously: Justification: The TC follows the assessment of the auditors.

A 5. (ASIIN 2) Revise the examination rules avoiding late grading of mid-term exams.

Initial Treatment	
Peers	Fulfilled Justification: The exam regulations are a university-level policy and can therefore not be altered for single programmes. The university states that it is in the process of reviewing the rules, which are to be considered by the University Senate. The experts are satisfied with this explanation and the initiation of the process.
TC 14	Fulfilled Justification: The TC follows the assessment of the auditors.

A 6. (ASIIN 4.3) Publish and implement rules and regulations for disabled students.

Initial Treatment	
Peers	Fulfilled Justification: Students can indicate in their application forms in case they have any kind of disability. The university is in the process of establishing special regulations accordingly.
TC 14	Fulfilled

	Justification: The TC follows the assessment of the auditors.

A 7. (ASIIN 3.2) Change the practice of using the same laboratory for student training as well as for diagnostics, as this is not in line with international GLP- Good Laboratory Practice standards.

Initial Treatment	
Peers	Fulfilled Justification: The university states that now different labs are used for teaching purposes and diagnostics. After the completion of a refurbished building, three additional labs will be available.
TC 14	Fulfilled Justification: The TC follows the assessment of the auditors.

A 8. (ASIIN 3.2) Invest in computer labs, as students frequently do not dispose of appropriate personal computers which is critical for a broad range of courses in the two Master's programs.

Initial Treatment	
Peers	Fulfilled Justification: Pictures document that a new computer lab with adequate hardware has been installed.
TC 14	Fulfilled Justification: The TC follows the assessment of the auditors.

A 9. (ASIIN 4.3) Finalize, publish, and make available a comprehensive students' handbook.

Initial Treatment	
Peers	Not fulfilled Unanimously Justification: The handbook was not presented to the experts.
TC 14	Not fulfilled Justification: The TC follows the assessment of the auditors.

A 10. (ASIIN 4.2) Update and complete the information in the Transcript of Records. Develop and hand out a Diploma Supplement to all graduates.

Initial Treatment	
Peers	Not fulfilled Justification: The Transcript of Records as well as the Diploma Supplement was not presented to the experts.

TC 14	Not fulfilled Justification: The TC follows the assessment of the auditors.

A 11. (ASIIN 5) Implement the various features of the QA system in place along the lines described in this report (students' evaluations of teachers; tracer studies; evaluations by employers; collecting reliable information regarding the achievement of graduates, average period of study, graduation rates etc.).

Initial Treatment	
Peers	Fulfilled Justification: A tracer study was implemented as a first instrument of QA. According to the university, more are about to be implemented.
TC 14	Fulfilled Justification: The TC follows the assessment of the auditors.

For the Master in Tropical Infectious Diseases and Zoonosis

A 12. (ASIIN 1.4) The admission requirement must clearly stipulate that next to veterinary Bachelor students also medical students can apply for the program preventing that prospective students might be deterred to enrol.

Initial Treatment	
Peers	Fulfilled Justification: The admission requirements as stated on the programme´s website are formulated very broadly and name various fields of Bachelor´s degrees, including Medicine, as accepted undergraduate studies.
TC 14	Fulfilled Justification: The TC follows the assessment of the auditors.

Decision of the Accreditation Commission (28.06.2024)

The Accreditation Commission recognises that the university has already made great efforts to improve the study programmes and fulfil the requirements and agrees with the experts and the Technical Committees that some of the requirements can already be considered fulfilled. With regard to the requirements that have not yet been fulfilled, the Commission also agrees with the assessments of the experts and the Technical Committee. In its view, there is a lack of physical evidence of the fulfilment of some requirements, for

example the Student Handbook requested by the reviewers or the information on the website of the degree programme regarding the ECTS credit points awarded. Further justifications regarding the non-fulfilment of requirements can be found in the table above.

Degree programme	**ASIIN-label**	**Subject-specific label**	**Accreditation until max.**
Ma One Health Analytical Epidemiology	Requirements A 1, A 2, A 3, A 4, A 9 and A 10 not fulfilled	-	6 months prolongation
Ma Tropical Infectious Diseases and Zoonosis	Requirements A 1, A 2, A 3, A 4, A 9 and A 10 not fulfilled	-	6 months prolongation

J 2nd Fulfilment of Requirements (06.12.2024)

Analysis of the experts and the Technical Committee 14 – Medicine (26.11.2024)

The experts carefully examine the report of the university but note that the documents which are referenced as proof or explanations were not delivered despite multiple requests. With great effort, they are able to find a study handbook on the university´s website, which appears to contain valid regulations for the two programmes under review. Based on this document, the experts consider four of the remaining six requirements as fulfilled. However, given that no information was contained and also not later-on provided by UNZA, two requirements remain unfulfilled. Therefore, the programmes do not fulfil the ASIIN quality criteria which this accreditation is based on.

Requirements

For both degree programmes

A 1. (ASIIN 1.1) Develop graduate profiles guiding students with regard to their future employment and provide evidence on the implementation of tracer studies.

Secondary Treatment	
Peers	fulfilled Justification: A survey was carried out and documented. However, it was not designed in such a way that profiles, e.g. occupational groups, can be immediately identified. Nevertheless, the experts, it can be seen as to fulfil the minimum standard of a graduate profile.
TC 14	fulfilled Justification: The TC follows the assessment of the auditors.

A 2. (ASIIN 1.5) Clarify in public documentation, how many credit points are needed for graduation and avoid that different ECTS calculations are used for the same course in different programs.

Secondary Treatment	
Peers	Not fulfilled Justification: The postgraduate handbook of the school of veterinary medicine clarifies that 240 credits have to be completed for

	graduation. However, no information was presented regarding the ECTS allocation and conversion.
TC 14	Not fulfilled Justification: The TC follows the assessment of the auditors.

A 3. (ASIIN 1.4) Advertise the tenders for financial sponsorships with more advance time to allow all students to apply and not miss the calls.

Secondary Treatment	
Peers	fulfilled Justification: UNZA explains that, currently, no financial sponsorships are available but credibly states that scholarships will be advertised 5 months in advance in case funds will be available.
TC 14	fulfilled Justification: The TC follows the assessment of the auditors.

A 4. (ASIIN 4.3) Introduce a formal orientation for newly enrolled students, in order to reverse the trend of increasing standard periods of study and decreasing graduation rates.

Secondary Treatment	
Peers	fulfilled unanimously Justification: UNZA explains that this has been done; however, the “school handbook” which was cited as proof was not available. However, the experts acknowledge a regulation in the postgraduate study guidelines that prescribes the organization of orientation activities by the schools or institutes.
TC 14	fulfilled unanimously: Justification: The TC follows the assessment of the auditors.

A 9. (ASIIN 4.3) Finalize, publish, and make available a comprehensive students’ handbook.

Secondary Treatment	
Peers	fulfilled Unanimously Justification: A handbook was made available on the university´s website.
TC 14	fulfilled Justification: The TC follows the assessment of the auditors.

A 10. (ASIIN 4.2) Update and complete the information in the Transcript of Records. Develop and hand out a Diploma Supplement to all graduates.

Secondary Treatment	
Peers	Not fulfilled Justification: UNZA refers to the need of a university-wide approach in this regard and points out that a draft has been created and will be proposed to the university Senate. However, the referenced documentation was not presented.
TC 14	Not fulfilled Justification: The TC follows the assessment of the auditors.

Decision of the Accreditation Commission (06.12.2024)

The Accreditation Commission discusses the procedure and deplores the apparent lack of documentation and transparency in UNZA´s efforts for quality improvement. However, given that the programmes clearly not fulfil all of the imposed requirements, the AC decides to refuse the accreditation.

Degree programme	**ASIIN-label**	**Subject-specific label**	**Accreditation until max.**
Ma One Health Analytical Epidemiology	Refusal	-	-
Ma Tropical Infectious Diseases and Zoonosis	Refusal	-	-

Appendix: Programme Learning Outcomes and Curricula

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by Master's degree programme Tropical Infectious Diseases and Zoonosis:

C2.1.3. Aims of the Programme

This program is designed to develop capacity for the students in the practice of formulating and implementing strategic programmes aimed at renewing and strengthening scientific knowledge and human resource capacity in tackling the challenges posed by infectious diseases and zoonoses in the Region

C2.1.4 Objectives of the programme

At the end of programme, graduates will be expected to:

i. Demonstrate knowledge and critical understanding of selected tropical infectious and zoonoses of diseases for the region;

ii. Demonstrate current knowledge of emerging and re-emerging infectious diseases

iii. Illustrate modes of transmission of diseases between animals and man and differentiate between direct contact, indirect contact, vector-borne and foodborne carriage of infections of animals and man.

iv. Design, implement and evaluate co-ordinated methods for human and animal infectious diseases.

v. Demonstrate ability to develop strategies for mitigation, prevention and control of infectious and zoonotic diseases

C2.2. Curriculum

C2.2.1 Programme Learning Outcomes

The key learning outcomes of this programme are as follows:

i. Master of Science students trained in tropical infectious diseases and zoonosis.

ii. Professionals with skills in diagnosis of tropical infectious diseases and zoonosis

iii. Publication of research findings in the field of tropical infectious diseases and zoonosis

C2.2.2. Level of Qualification and Articulation in the Zambia Qualifications Framework.

ZQF Level 9

At this level, it is expected that the graduate shall:

i. Demonstrate knowledge and critical understanding of selected tropical infectious and zoonoses of diseases for the region;

ii. Demonstrate current knowledge of emerging and re-emerging infectious diseases

iii. Illustrate modes of transmission of diseases between animals and man and differentiate between: direct contact, indirect contact, vector borne and foodborne carriage of infections of animals and man.

iv. Design, implement and evaluate co-ordinated methods for human and animal infectious diseases.

v. Demonstrate ability to develop strategies for mitigation, prevention and control of infectious and zoonotic diseases

vi. Apply research principles in design and undertaking a research study in the field of infectious diseases

The following curriculum is presented:

(a) Table 1: Teaching and Learning Plan: Year 1 (Core courses)

Course Code	Course Name	Contact Hours													Credit Points
		Lectures		Tutorials		Laboratory sessions		Seminars		Fieldwork		Self-study and assignments			
		Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Notional Hours	
VMM 7701	One health Medicine and Globalisation	4	15	2	15	0	0	2	3	3	5	4	15	171	17.1
VMM 7901	Research methodology and Computer applications	5	15	2	7	3	7	2	3	3	6	4	15	194	19.4
VMM 7501	Principles of Epidemiology and Biostatistics	4	15	2	7	2	15	2	3	3	8	4	15	194	19.4
TDZ 7210	Infectious Diseases and Zoonoses	4	28	0	0	4	10	3	7	3	7	2	28	250	25

TDZ 7311	Immunology of Infectious Diseases	4	15	0	0	0	0	2	3	0	0	2	15	96	9.6
TDZ 7411	Principles of public health and policies	4	14	2	7	0	0	2	8	2	7	2	14	128	12.8
TDZ]7402	Bioethics and Welfare	4	14	2	4	0	0	2	10	3	6	2	14	130	13.0
TDZ 7502	Laboratory diagnostic Methods and Techniques	4	14	2	4	6	12	2	8	3	6	2	14	198	19.8
XXXXX	Elective Course	4	15	2	7	0	0	2	3	3	7	2	15	131	13.1
	Total for Year 1													**1492**	**149.2**

b) Elective Courses: Year 1

Course Codes	Course Names	Lectures		Tutorials		Laboratory sessions		Seminars		Field Work		Self-directed learning and assignments		Notional hours	Credits
		Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks		
VMM 7612	Disease Modelling and Geographical Information Systems	4	15	2	7	0	0	2	3	3	7	2	15	131	13.1
VMM 75 22	Molecular Epidemiology and Bio-informatics	4	15	2	7	3	7	2	3	0	0	2	15	131	13.1

(b) Year 2

Course Code	Course Name	Contact Hours													Credit Points
		Lectures		Tutorials		Laboratory sessions		Seminars		Fieldwork		Self-study and assignments			
		Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Hrs/wk	No. of wks	Notional Hours	
TDZ 8004	Research project (Dissertation)	0	0	0	0	40	15	3	10	35	12	7	45	1365	136.5
	Total for year 2													**1365**	**136.5**

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by Master's degree programme One Health Analytical Epidemiology:

C2.1.3 Aims of the Programme

This programme aims at developing human resource capacity in SADC countries for research in both veterinary and human medicine as part of "The One Health Concept." The 'One Health Concept' emanates from the fact that infectious diseases of humans and animals are increasingly becoming a matter of concern to human welfare and economic development. The realisation that most emerging human pathogens are of animal origin makes infectious diseases a shared problem between human and animal health sectors, and their control a common objective of 'One Health'. There is therefore a need to have shared training in epidemiology between these professionals so that there is a common understanding of the problems posed by these diseases. The programme also offers an opportunity for health professionals from different fields to interact and share their experiences. This will result in the development of workable solutions that can effectively be used to prevent and control disease outbreaks in our populations

C2.1.4 Objectives of the Programme

(i) To demonstrate knowledge of the concept of "One Health" and its application

(ii) To integrate knowledge of how interactions between human and animal populations and the environment can lead to emergency and re-emerging of infectious diseases.

(iii) To plan, undertake and analyze data from a research project concerning human, animal and zoonotic diseases and be able to monitor and evaluate activities for policy and programme development.

(iv) To apply a scientific style of writing in the presentation of research

(v) To apply economic and socio-economic concepts and methods in the design, implementation and evaluation of health delivery services.

(vi) To determine the factors affecting the spread of disease through human and animal populations and be able to prevent or control such spread

C2.2 Curriculum

C2.2.1 Programme Learning Outcomes

At the end of programme, graduates will be expected to:

(i) Demonstrate knowledge of the concept of "One Health" and its application in the development of health policy and the control and prevention of infectious diseases

(ii) Demonstrate knowledge of how interactions between human and animal populations and the environment can lead to emergency and re-emerging of infectious diseases.

(iii) Plan, undertake and analyse data from a research project concerning human, animal and zoonotic diseases and be able to monitor and evaluate activities for policy and programme development.

(iv) Apply a scientific style of writing in the presentation of research

(v) Apply economic and socio-economic concepts and methods in the design, implementation and evaluation of health delivery services.

(vi) Determine the factors affecting the spread of disease through human and animal populations and be able to prevent or control such spread

C2.2.2 Level of Qualification and Articulation in the Zambia Qualifications Framework

ZQF level: **9**

At this level, it is expected that the graduate shall be:

(vii) Able to demonstrate knowledge of the concept of “One Health” and its application in the development of health policy and the control and prevention of infectious diseases

(viii) Able to demonstrate knowledge of how interactions between human and animal populations and the environment can lead to emergency and re-emerging of infectious diseases.

(ix) Able to plan, undertake and analyse data from a research project concerning human, animal and zoonotic diseases and be able to monitor and evaluate activities for policy and programme development.

(x) Able to apply a scientific style of writing in the presentation of research

(xi) Able to apply economic and socio-economic concepts and methods in the design, implementation and evaluation of health delivery services.

(xii) Able to determine the factors affecting the spread of disease through human and animal populations and be able to prevent or control such spread.

The following curriculum is presented:

(a) Year 1(Core Courses)

Course Codes	Course Names	Lectures		Tutorials		Laboratory sessions		Seminars		Field Work		Self-directed learning and assignments		Notional hours	Credits
		Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks		
VMM 7601	Emerging and Re-emerging diseases (Core)	4	15	0	0	3	7	2	3	3	4	4	15	144	14.4
VMM 7501	Principles of Epidemiology and Biostatistics (Core)	4	15	2	7	2	15	2	3	3	8	4	15	179	17.9
VMM 7701	One Health Medicine and Globalisation (Core)	4	15	2	15	0	0	2	3	3	5	4	15	156	15.6
VMM 7901	Research Methodology and Computer Applications	5	15	2	7	3	7	2	3	3	6	4	15	179	17.9
VMM 7612	Disease Modelling and Geographical Information System (Core)	4	15	2	7	0	0	2	3	3	7	2	15	131	13.1
VMM 7512	Advanced Statistics Methods in Epidemiology (Core)	4	15	3	7	0	0	2	3	0	0	4	15	132	13.2
VMM 7201	Disease Surveillance and Risk Analysis (Core)	4	15	2	7	0	0	2	3	3	8	4	15	149	14.9
XXXXX	Elective Course	4	15	2	7	0	0	2	3	3	7	2	15	131	13.1
	Total													**1201**	**120.1**

b) Elective Courses: Year 1

Course Codes	Course Names	Lectures		Tutorials		Laboratory sessions		Seminars		Field Work		Self-directed learning and assignments		Notional hours	Credits
		Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks		
VMM 7802	Health Economics, Policy, Monitoring and Evaluation (Elective)	4	15	2	7	0	0	2	3	3	7	2	15	131	13.1
VMM 7532	Environmental Epidemiology	4	15	2	7	0	0	2	3	3	7	2	15	131	13.1
VMM 7522	Molecular Epidemiology and Bio-informatics	4	15	2	7	3	7	2	3	0	0	2	15	131	13.1

Table 2: Teaching and Learning Plan: Year 2

Course Codes	Course Names	Lectures		Tutorials		Laboratory sessions		Seminars		Field Work		Self-directed learning and assignments		Notional hours	Credits
		Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks	Hrs Per week	No. of Weeks		
VMM 7004	Research Project	4	6	0	0	0	0	2	7	25	30	15	30	1238	123.8
	TOTAL													**1238**	**123.8**