

Accreditation Report

Mongolian National University of Medical Sciences (MNUMS)

Ulan Bator, Mongolia

**"Dentistry" (B.Sc.), "Pharmacy" (B.Sc.), "Online Master's Programme in Medicine"
(M.Sc.)**

I Procedure

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The **Assessment Report** of the peer-review experts is **based on** the self-assessment report of the HEI and discussions with its management, heads of the departments, heads of the study programme, lecturers, staff representatives, students, and alumni.

The basis of the **Assessment Criteria** is part 1 of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) in the current official version. At the same time, the national context, particularly the national regulations regarding the establishment of study programmes, are taken into account.

Content

I	Procedure	1
II	Introduction	5
1	Short profile of HEI.....	5
2	General information on the study programme	9
III	Implementation and assessment of the criteria.....	12
1	ESG Standard 1.1: Policy for quality assurance	12
1.1	Implementation.....	12
1.2	Assessment	13
1.3	Conclusion	14
2	ESG Standard 1.2: Design and approval of programmes	15
2.1	Implementation.....	15
2.2	Assessment	21
2.3	Conclusion	25
3	ESG Standard 1.3: Student-centred learning, teaching, and assessment.....	27
3.1	Implementation.....	27
3.2	Assessment	30
3.3	Conclusion	31
4	ESG Standard 1.4: Student admission, progression, recognition, and certification	33
4.1	Implementation.....	33
4.2	Assessment	40
4.3	Conclusion	43
5	ESG Standard 1.5: Teaching staff.....	44
5.1	Implementation.....	44
5.2	Assessment	48
5.3	Conclusion	50
6	ESG Standard 1.6: Learning resources and student support	51
6.1	Implementation.....	51
6.2	Assessment	60
6.3	Conclusion	63
7	ESG Standard 1.7: Information management	64
7.1	Implementation.....	64
7.2	Assessment	66
7.3	Conclusion	66
8	ESG Standard 1.8: Public information	67
8.1	Implementation.....	67
8.2	Assessment	68

8.3	Conclusion	69
9	ESG Standard 1.9: On-going monitoring and periodic review of programmes	70
9.1	Implementation.....	70
9.2	Assessment	73
9.3	Conclusion	74
10	ESG Standard 1.10: Cyclical external quality assurance	75
10.1	Implementation.....	75
10.2	Assessment	76
10.3	Conclusion	77
IV	Recommendation to the Accreditation Commission of ACQUIN	78
1	Assessment of compliance the Standards and Guidelines in the Higher European Area (ESG) in the actual official version.....	78
2	Accreditation Recommendation	78
V	Decisions of the Accreditation Commission of ACQUIN.....	80

II Introduction

The experts would like to thank the representatives of the institution as well as its students for taking part in the discussions and willingly sharing information and their views during the on-site visit. The discussions are valuable not only for the assessment of the institution but also for a better understanding of the legal and sociocultural context of the local higher education system.

The evaluation basis for the peer-review experts is the self-assessment report of the institution as well as intensive online discussions during with the institution management, heads of the departments, head(s) of the study programme, study programme coordinators, teachers, lecturers, administrative staff, students, and graduates.

The main objective of the accreditation procedure is to assess the quality of the study programme and compliance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). The ESG standards are applied as the main assessment criteria in the international accreditation procedure. In addition, the respective country-specific criteria and standards are taken into account.

A group of experts is set up to ensure that all areas relevant to the accreditation procedure (e.g., legal, structural, social, etc. aspects) as well as the ESG and national criteria are considered. The peer-review experts include professors, a representative of the professional practice, and a student representative. A certificate with the ACQUIN seal is awarded upon successful accreditation of the study programme.

1 **Short profile of HEI**

The history of MNUMS goes back to 1942, when the "Faculty of Human Medicine" was established at the Mongolian National University. Currently, as the only state-owned higher education national Institution in Medical Sciences, the University functions with 11 schools (8 schools at Ulan Bator, 3 outside), 4 research institutes, the centre of Molecular Diagnosis, 4 university hospitals, 2 sanatoriums, 2 kindergartens and a general secondary school (a lyceum) (www.mnums.edu.mn). It employs a total number of 1386 teaching staff, nurses, medical and technical workers. It offers 29 bachelor degrees, 18 master programmes, 11 diploma, 55 doctoral and postgraduate programmes for 16,000 students. MNUMS employs 49 professors, 90 associate professors, 127 senior faculty, 173 faculty and 82 junior faculty.

The University Governing Board comprises of 15 members selected and/or appointed in accordance with the Law on Higher Education. Half (53%) of members represents Ministry of Health, Ministry of Education and Science, Professional Inspection Agency, Ministry of Finance, Academy of Sciences, Science and Technology Fund, National Trauma and Orthopedic Research Center and the rest is representatives of MNUMS faculties, students and graduates.

School of Dentistry (SoD)

The establishment of dentist programmes at the university traces back to 1955, when the first cohort of teaching staff was trained in Russia, but it was 1961 when the medical faculty of Mongolian National University (now MNUMS) started preparing dentists solely for the first time in its 3-year programme. The programme was continued with the establishment of the Dental Department (DD) in 1978 followed by the foundation of the Dental Centre in 1995. By the decision (decree A\71) of the MNUMS in 1999, the centre was expanded into the School of Dentistry within the structure of the university. Currently, the school operates with the following seven departments: Department of Operative Dentistry, Department of Oral and Maxillofacial Surgery, Department of Prosthodontics, Department of Paediatric and Prevention Dentistry, Department of Orthodontics, Department of Periodontics and Endodontics, and Department of Dental Technology and Oral Hygiene.

The school employs a total number of 76 people (34 full-time, two part-time teaching staff, two teaching assistants, eight doctors, six nurses, three dental technicians, two dental sterilization technicians, one radiologist, two imagery technicians, an engineer, a methodologist, and 14 people for administration, maintenance, and service). There are 60 faculties from others (38 from SoB, 18 from SoM, four from SoPH) who collaborate in implementing DP.

The school offers a 6-year bachelor's degree programme for dentists, 3-year diploma programme in oral hygiene, a 3-year diploma programme for dental technicians, 2-year master's and 3-year doctoral and a vocational training for dental assistants. Apart from these programmes, the school provides postgraduate programmes in Prosthodontics, Orthodontics, General Dentistry, Periodontics, Endodontics, Oral and Maxillofacial Surgery, and Paediatric Dentistry. Totally, 1200 students are enrolled in these programmes including 27 doctoral and 130 master's students, and 236 residents.

The SoD successfully collaborates with 30 medical institutions from 20 countries including 19 dentistry schools of Japan, South Korea, Russia, Cuba, China and Taiwan.

Over the years of its existence, the school has solely trained a total number of 2691 dentists (until the first private institution had graduation in 2006). During the period of 2006-2022 the other HEIs have prepared 1040 dentists. In 2017, the SoD introduced the first model of the "University hospital" in Mongolia and now it is regarded as one of the leading dental diagnostic and clinical center.

School of Pharmacy

Since 1961, the MNUMS School of Pharmacy has provided Pharmacy programmes, and in the past, the Bachelor in Pharmacy has undergone a total of 12 reforms. Since 2008, a training programme has been implemented to train qualified professionals to provide "patient-centered care" per changes to worldwide trends and concepts of pharmaceutical care.

The School of Pharmacy has a total of 28 teachers, 1 methodologist, and 6 staff members. In terms of academic degrees, there are 3 professors, 5 associate professors, 3 doctorates, 17 masters, and a total of 697 students. The School of Pharmacy implements the Bachelor in Pharmacy with more than 70 teachers from School of Biomedicine, School of Medicine, and School of Public Health of the MNUMS. The School of Pharmacy and Graduate School implement master's programme on pharmacy. Basic research courses taught from Graduate school, Professors from school of pharmacy teach professional courses.

The institution operates with a Management Team of Administration, Academic Council, Council of Department Heads, and Programme Sub-committee, as well as 4 main professional departments and 5 practice bases.

The School of Pharmacy has a 173 credit curriculum for pharmacists approved by the director of the MNUMS on November 7th, 2016, and the general basic, professional basic and specialization courses (model approved by the minister of Education, 2014 order a/174) set out in the training plan, a student-centered, competency-based training that will address health issues related to drug production, drug quality, safety, drug distribution, storage, drug delivery and drug use, defines the ethics of the specialist and how to evaluate the student.

The mission of the school: to develop a pharmacist who leads by knowledge, competence, and ethics with these core values: (1) Tradition-development, (2) Leadership, (3) Ethics, (4) Professional skills, (5) Innovator.

The school prides itself with being a Mongolian pioneer and innovator, having years of rich experience, study programme on an international level with research-based learning. It has

distinguished graduates with a 100% employment rate. It is a humane, competent, and creative collective and a native prestigious school.

Graduate School

The Graduate School (GS) at MNUMS is responsible for postgraduate education, supported by 699 faculty members with doctoral degrees or higher. The International Cyber Education Centre (ICEC) ensures student-centred, feedback-driven education.

Building on 28 years of experience in implementing graduate training, the International Cyber Education Centre (ICEC) was established by Order No. B/35 of the Rector of MNUMS on September 7, 2015. This was done with the aim of providing equal opportunities for doctors and medical professionals in the healthcare sector to pursue advanced education and professional development regardless of physical location and time constraints.

When introducing the first online master's Programme in Mongolia, the content, technology, and methodology were developed in collaboration with visiting professors namely, Professor Young Moon Chae of Yonsei University in South Korea, an honorary professor at MNUMS, and Professor Meredith Praamsma of Johns Hopkins University, Maryland, Baltimore. The programme was aligned with international trends in higher education and initially launched with two public health programmes. By 2016, it expanded to include six programmes: Medicine, Traditional Medicine, Dentistry. Pharmaceutical Sciences, Nursing, Biomedical Science.

2 General information on the study programme

“Dentistry” (Bachelor)

Location	Mongolian National University of Medical Sciences (MNUMS), School of Dentistry (SoD); https://mnums.edu.mn/
Date of introduction	in 1961 (3-year program); in 1975 (5-year program); since 2014 up to now 6-year program
Faculty/department	School of Dentistry (SoD)
Standard period of study (semesters)	6 years
Number of ECTS credits	201 (equal to 402 ECTS); since October, 2022: 195 (equal to 390 ECTS)
Number of study places	
Number of students currently enrolled	852
Average number of graduates per year	125
Target group(s)	Prospective students who have completed general secondary education
Admission requirements	General Entrance Examination
Form of study	full-time
Tuition fee	3,613,878 MNT

“Pharmacy” (Bachelor)

Location	Mongolian National University of Medical Sciences, School of Pharmacy, Bayangol district, 6th subdistrict, Ard Ayush Street, MNUMS East campus
Date of introduction	2008
Faculty/department	School of Pharmacy
Standard period of study (semesters)	5 years
Number of ECTS credits	173
Number of study places	200 - 250
Number of students currently enrolled	728
Average number of graduates per year	85
Target group(s)	Prospective students who have completed general secondary education
Admission requirements	General Entrance Examination
Form of study	full-time
Tuition fee	19,862,670 MNT (total of all years)

"Online Master's Programme in Medicine" (Master)

Location	Mongolian National University of Medical Sciences, S. Zorig's street-3, Post-48/111 Ulaanbaatar City 14210, Mongolia
Date of introduction	2016
Faculty/department	Mongolian National University of Medical Sciences (MNUMS), Graduate School (GS), International Cyber Education Centre (ICEC)
Standard period of study (semesters)	2 years
Number of ECTS credits	35 (70 ECTS)
Number of study places	200 per year
Number of students currently enrolled	253
Average number of graduates per year	91
Target group(s)	doctors and medical professionals working in remote areas
Admission requirements	Bachelor of Medicine
Form of study	distance studies
Tuition fee	3,024,000 MNT (Year 1), 2,346,000 MNT (Year 2)

III Implementation and assessment of the criteria

1 ESG Standard 1.1: Policy for quality assurance

Institutions should have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes, while involving external stakeholders.

1.1 Implementation

The policy for quality assurance at the Mongolian National University of Medical Sciences (MNUMS) is outlined in several key documents and regulations. The MNUMS Development Policy, initially developed for the period 2015-2024 and later revised for 2021-2030, serves as a foundational document guiding the university's operational processes. This policy is aligned with the National Development Policy, Policy on Education, and Policy on Science and Technology.

Following extensive discussions with the staff of the University and all related parties, the MNUMS Development Policy for 2021-2030 (Appendix 2) was adopted (MNUMS Governing Board, decree 06, 26 April 2021). In this document the Vision, Mission, educational concepts, key principles and values were revised. Currently, guided by a newly defined mission as "to be a leader in the field of health, medical education, and research", the University has been implementing its development policy which comprises of 9 objectives. They cover CPD of teaching staff, favorable environment for research, a quality learning and teaching, world-class campus, the university medical system, legal reforms, effective governing, integrated IT system, multiple sources of financing and investment. With the aim to reach objectives 34 implementation strategies, 84 actions and activities, and 46 CPIs are set (Appendix 2. MNUMS Development Policy).

The University QA Policy, designed to ensure high-quality services to students, was approved in 2016 and outlines the University Quality Management (QM) structure, including the duties and responsibilities of the units involved, data collection processes, and related requirements and regulations at both national and university levels.

In addition to these overarching policies, specific regulations and procedures have been developed to ensure the quality of academic programmes. These include the MNUMS Regula-

tion of Monitoring of Training Technology and Quality Control, the Regulation of MNUMS Performance Monitoring and Evaluation, and the MNUMS Regulation for Undergraduate Education. These documents are accessible on the University website.

To ensure a common understanding of quality matters, the MNUMS QA Handbook was developed in 2016 and distributed to all units, schools, and departments. The Department of Monitoring, Evaluation, and Internal Auditing (DMEIA) and the Department of Undergraduate Education Policy and Management (DUEPM) are key units responsible for overseeing the implementation of the University's QA policy. The DMEIA, especially, oversees the implementation of the University policy, including planning, performance monitoring, analyzing and evaluating processes and outcomes of main activities, and developing recommendations. It also monitors processes of receiving and solving complaints and requests, ensuring transparency of activities of the units and schools, and collecting data for evaluation. The University QA Policy and related regulations and procedures are periodically revised to ensure they remain aligned with the changing needs of students and the evolving educational landscape.

Stakeholders are actively involved in the internal quality assurance processes at MNUMS through various mechanisms and channels. The development of internal quality assurance policies and regulations involves input from faculty members, administrative staff, students, and relevant departments. Policies are designed to ensure high-quality services to students and meet their changing needs within the university's research-based and conceptually justified policy framework. These

For example, regular evaluation of faculties based on their workload performance is conducted, and stakeholders provide input through satisfaction surveys and feedback mechanisms.

1.2 Assessment

The MNUMS has a formal policy for quality assurance that is outlined in various documents and has recently been revised for 2021-2030. In this MNUMS Development Policy for 2021-2030 a newly defined mission ("to be a leader in the field of health, medical education and research") has been implemented. The MNUMS Development Policy for 2021-2030 is publicly available and includes quality assurance (QA) for all areas. All different types of stakeholders are sufficiently and through various measures involved in the implementation, monitoring and revision of the QA policy.

The policy for quality assurance at MNUMS is well-defined and supported by a robust framework of regulations and strategic documents (pieces of evidence show that the MNUMS Development Policy, originally developed for 2015-2024 and revised for 2021-2030). This policy can serve as a cornerstone, guiding the university's operations with a clear vision and mission, aiming to lead in health, medical education, and research.

The QA system was well-integrated into the university's operations, with key units such as the Department of Monitoring, Evaluation, and Internal Auditing (DMEIA) and the Department of Undergraduate Education Policy and Management (DUEPM). The evidence shows that the governance of quality assurance is reinforced by the University Quality Assurance (QA) Policy, established in 2016.

MNUMS quality assurance system is comprehensive, well-governed, and aligned with international standards, fostering an environment that promotes educational excellence and research innovation. The institution's commitment to continuous improvement, transparency, and stakeholder engagement positions it well to meet the demands of both the local and global academic communities.

The MNUMS quality assurance policy, with support from key units like the Department of Monitoring, Evaluation, and Internal Auditing (DMEIA), actively involves a variety of stakeholders—faculty, students, and administrative staff—through organized feedback channels. While the policy broadly emphasizes quality and inclusivity, it does not yet explicitly address gender equality and equal opportunity. However, stakeholder discussions revealed positive opportunities for enhancing these areas within the policy framework. Future updates to policies could benefit from the formal inclusion of gender equality goals and equal opportunity metrics, reinforcing the institution's commitment to these principles.

The Department of Monitoring, Evaluation, and Internal Auditing (DMEIA) and the Department of Undergraduate Education Policy and Management (DUEPM) could further support gender equality and equal opportunity by monitoring metrics specific to these areas, such as gender representation among faculty and students, and tracking opportunities for underrepresented groups.

1.3 Conclusion

The criterion is **fulfilled**.

2 ESG Standard 1.2: Design and approval of programmes

Institutions should have processes for the design and approval of their programmes. The programmes should be designed so that they meet the objectives set for them, including the intended learning outcomes. The qualification resulting from a programme should be clearly specified and communicated and refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.

Standard 1, criteria 1.2:

Programme objectives

The programme's objectives are coherently integrated with the national qualification framework, the organization's mission and objectives, and the requirements of relevant professional fields and stakeholders. The programme is designed to fulfill the educational needs of the students while maintaining the standards of the organization. The objectives of the programme are intended to provide an educational experience that is in line with the current demands and practices of the professional fields and the stakeholders associated with them. The programme aims to equip the students with the necessary knowledge and skills that are essential to succeed in their professional lives.

2.1 Implementation

The design process for academic programmes involves a comprehensive approach that aligns with national policies, professional requirements, and international standards. The process also involves evaluating public health needs and international development trends to ensure the programme's relevance and alignment with societal needs.

The approval of newly developed programmes and decisions regarding programme changes, as well as opening and closing of programmes, is the responsibility of the MNUMS Academic Program Committee. The Academic Program Committee comprises sub-committees at various levels, including those at schools, departments, and for graduate and postgraduate programmes. These sub-committees play a role in discussing and making decisions regarding programme development and renewal. The final approval of academic programmes is made by the President of MNUMS based on recommendations and decisions from the relevant committees.

The study programmes at MNUMS are designed to align with the university's mission and overall strategy, which is focused on being a leader in the field of health, medical education, and research. The university's development policy, comprising of nine objectives, guides the strategic direction, and the study programmes are expected to contribute to the achievement of these objectives. The programmes are designed to train globally competitive medical professionals, create a learning-friendly environment, develop the university hospital system, and meet legal reforms for sustainable development, among other goals.

The design of study programmes involves the active participation of external stakeholders and students. External stakeholders, including employers, professional organizations, Pharmaceutical Society, and relevant government bodies, play a role in providing input and feedback during the design and renewal of study programmes.

Students are involved in the design of study programmes through various channels, including curriculum subcommittees, student councils, research advisors, and group tutors. Their input and feedback are considered in the development and evaluation of study programmes, ensuring that the programmes meet the needs and expectations of the student body.

MNUMS implements appropriate learning load in "Educational Technology and Quality Control Regulations" approved by Order No. A/19 of 2021. Breakdown of study hours are provided according to the class hours are calculated in person classroom, non-classroom, and online formats. One Mongolian credit hour is equivalent to 48 hours at all education levels. Considering the student's study load, each academic term lasts 16 weeks, in addition to the examination period. Per regulation (3.11.2), a specific percentage of the total set time is dedicated to self-study, with 1 hour of lecture requiring 2 hours of self-study, and 2 hours of practical seminar requiring 1 hour of self-study. This ensures a balanced relationship between theory and practice, with the scope of independent study or assignment (lecture: practice/seminar: homework/assignment) reflected in a ratio of 8:16:24.

The order of the Minister of Education and Science No. A/370 sets out the general requirements for master's and doctoral degree programmes for all universities in Mongolia. These include programme introduction, study plan, curriculum, organization of the programme, learning environment requirements, requirements for entrants, requirements for teaching staff, skills to be acquired by graduates, student assessment and programme quality assurance.

These ministerial regulations are set out in detail in order of the President of MNUMS No. A/28 for MNUMS. Activities, composition, structure, organization, duties, rights, ethical standards,

meeting rules and funding of the Curriculum Commission and the Curriculum Subcommittee are formalized in the Regulation of the President of MNUMS No. A/225.

According to the "Regulations on Compliance with Credit Hour Equivalence," approved by Annex 1 of Order No. A/348 of the Ministry of Education and Science (October 6, 2021), "Commonly Used Credit Hour Ratios" state that 1 credit hour in Mongolia is equivalent to 2 ECTS credit hours.

2.1.1 Bachelor of Dentistry

The Bachelor's programme in Dentistry at MNUMS is a comprehensive six-year programme designed to prepare students for a career in dentistry. The programme, indexed as D091101, is offered by the School of Dentistry at MNUMS and is aligned with the university's mission to be a leader in the field of health, medical education, and research.

The programme has evolved over the years, transitioning from a 3-year programme in 1961 to the current 6-year programme, reflecting the changing needs of the dental profession and advancements in dental education.

The programme is designed to equip students with the necessary knowledge, skills, and attitudes to practice dentistry effectively. The curriculum includes a range of courses covering areas such as oral health, maxillofacial surgery, prosthodontics, orthodontics, and paediatric dentistry. The learning outcomes of the programme are aligned with the Programme Educational Objectives (PEO) and Programme Learning Outcomes (PLO), which focus on competencies such as scientific research, community oral health needs, and ethical standards.

The Programme Educational Objectives (PEO) of the Dentistry programme have been defined based on the mission of the University and reflect the general competencies expected of graduates. The PEOs are designed to provide professional support and expertise to students, enabling them to: (1) Prevent oral diseases, (2) Diagnose common oral diseases, (3) Treat common oral diseases, (4) Maintain communication and ethics of a medical worker, (5) Continuously learn and seek personal and professional growth. These objectives are aimed at guiding the development of the programme and shaping the general competencies that graduates are expected to possess.

The Programme Learning Outcomes (PLOs) of the Dentistry programme are developed to align with the Programme Educational Objectives and reflect the specific competencies and skills that students are expected to acquire throughout the programme. The PLOs are organized into 17 outcomes across six domains.

After obtaining their license, the graduates of the Bachelor of Dentistry can be employed as dentists in all levels of state and/or private medical institutions, as specialists/officers in the MoH, the Health Development Centre, the Health Ulaanbaatar city Department and the Health Departments in provinces. They can become researchers in research institutes and centres or specialists in the National Inspectorate. Out of a total number of graduates 58.4% are employed, 28% continue their education, and 12.5% are unemployed. This data covers the period from 2017 till October 2022 and that means some of June 2022 are still seeking for a job.

2.1.2 Bachelor of Pharmacy

The aim of the Pharmacy programme is to produce a Bachelor of Science with full knowledge of pharmacology and clinical pharmacy, who has graduated from a school with a license to pursue a Bachelor of Pharmacy, has received a license to practice medicine from a health accreditation agency, has basic clinical knowledge, and has the professional skills and ethical maturity to provide a high level of clinical pharmacy care.

The Bachelor's in Pharmacy has a comprehensive 7-framework competency and coordinates all-round communication aimed at providing professional pharmaceutical care and services, providing medical institutions and the population with medicines, medical devices, and health products. These include: (1) Providing pharmaceutical and public health care to the population, (2) Cultivate appropriate medicinal drug use for each individual, (3) Optimal drug treatment for common diseases and other diseases, (4) Monitor treatment and evaluate drug treatment, (5) To have the ability to plan, implement, assess, evaluate, and develop policies for evidence-based pharmaceutical care by using pharmaceutical and other scientific methods and models to respond to the needs of pharmaceutical organizations to improve their organization.

The Bachelor's in Pharmacy is aimed at training professionals to work in the medical and pharmaceutical sector who have the knowledge, skills, and attitudes necessary to organize events aimed at improving, promoting, and protecting the health of the population, preventing diseases and providing health education to the population, the pharmacist plays an important role in bringing the development of the health sector to international standards, and the pharmacy graduates are sought-after professionals in the labour market who can work in many fields: clinical pharmacist in a hospital, pharmacy technician in a pharmacy, teacher, researcher, expert in training and research institutions, pharmacist-manager in other pharmaceutical institutions.

In line with the educational goals and objectives of the programme, and based on feedback from employers and other stakeholders, a list of the learning outcomes of the programme,

including the knowledge and skills required for graduates, has been determined. It also identifies the following seven comprehensive competencies or outcomes (Programme Learning Objectives PLOs) at the end of the programme, which are harmonized with the criteria published by the domestic and international accreditation bodies and the characteristics of graduates corresponding to the respective field programmes: (1) PLO-1. Care provider, (2) PLO-2. Respondent, (3) PLO-3. Partner, (4) PLO-4. Organizer, (5) PLO-5. Health counsellor, (6) PLO-6. Learner, (7) PLO-7. Specialist.

A graduate of the programme is a quality assurance manager in a pharmaceutical factory, quality control manager, production manager, technologist, drug analyser in a pharmaceutical laboratory, clinical pharmacist in a hospital, warehouse manager in a pharmaceutical supply organization, quality manager, sales manager, order recipient, dispenser, preparer, pharmacy manager, pharmacy technician, teacher, researcher, expert in a training and research institution, they are a sought-after specialist in the labour market, who can work in many areas, including as a pharmacist-manager in other pharmaceutical organizations.

Due to the rapid development of pharmaceutical science, the large number of new drugs used for treatment, and the proliferation of strong-acting and synthesized drugs, there are high requirements for the responsibilities of pharmacists. In conjunction with the need to expand traditional "supply-oriented" care to include "patient/client-centered care" to provide effective drug treatment, ensure the safety of drug treatment, and ensure the efficient use of drugs, pharmacists are required to provide drug-related information and evaluate drug treatment.

2.1.3 Online Master's Programme in Medicine

Master's programmes are located between the Bachelor's and doctoral programmes and represent an important step in an academic and personal career.

Mongolia, with a vast area of 1.56 million square kilometres and a population of 3.7 million, faces a shortage of healthcare workers in rural areas. Due to the nature of the profession, doctors and medical professionals require continuous education, but leaving their jobs to study is a significant challenge in remote areas. Implementing the online master provides opportunities for career growth and education regardless of time and location.

82-84% of Mongolia's healthcare professionals are MNUMS graduates, highlighting the need for continuous graduate training. The master's training needs are identified as follows:

- Professional advancement for medical professionals.
- Lifelong education for MNUMS graduates.
- Career development pathways for medical professionals, including promotions.

To accelerate the Online Master's Programme in Medicine to an international standard, and to recruit foreign students, all course materials were developed in both English and Mongolian. The programme utilizes the Moodle system, which has over 410 million users in more than 240 countries worldwide. The first admission for the Online Master's Programme in Medicine began with 104 students from 21 provinces and one international student from South Korea.

The Online Master's Programme in Medicine began admitting students in 2016 and initially implemented a 40-credit curriculum. Following a satisfaction survey of programme stakeholders in 2019 and to comply with regulations from the central government administration, the programme was adjusted to 37 credits after discussions at the graduate education committee revision. Additionally, in 2021, the research methodology courses were further enhanced to align with master's programmes at recognized universities. The results of the external evaluation (2) and the evaluation of programme coherence and redundancies over content (3) related to higher education reform were reviewed twice by the Division for Monitoring, Evaluations and Inspection of MNUMS. The current Online Master's Programme in Medicine has been running with a revised 35 credit-hour plan since 2021,

Graduates of the Online Master's Programme in Medicine will achieve and master the following learning outcomes:

- Searching and analyzing information from the database of scientific knowledge, synthesizing it through critical review.
- Obtaining permission from institutions with rights and conducting research from participants, issuing findings.
- Conducting research using systematic methods and models.
- Performing statistical analysis on primary data.
- Achieving effective learning outcomes through advanced technology.
- Conducting rigorous and concise academic research.

- Presenting comprehensive results of educational products.

By achieving these learning outcomes, graduates will become researchers proficient in medical science research methodology, developers of evidence-based medicine, project implementers capable of advancing evidence-based medicine. They will be creative, humane, compassionate practitioners who adhere to ethical standards.

2.2 Assessment

2.2.1 Bachelor of Dentistry

The Bachelor of Dentistry at the Mongolian National University of Medical Sciences (MNUMS) is a very well-organized study programme that aligns strongly with the university's "Development Policy-2030, as well as the mission of the university.

The study programme provides a comprehensive education in Dentistry. The curriculum is designed to equip students with up-to-date knowledge and it gives access to modern equipment, fulfilling the requirements at all educational levels and training globally competitive healthcare professionals. The structure of the programme, with an emphasis on hands-on training sessions, supports the achievement of its objectives, offering practical experience that complements theoretical learning.

Graduates of the programme have defined career opportunities, including the possibility to pursue postdoctoral studies or engage in further research within the university. Additionally, they can enter the private sector as clinical dentists, offering a range of career paths post-graduation. The expected student workload is well-defined and transparent, ensuring students have a clear understanding of their academic requirements.

The mandatory internships within the programme are carefully structured, covering all aspects of Dentistry, and the institution provides adequate support throughout the process. This ensures that students gain comprehensive practical experience in various fields of the profession.

2.2.2 Bachelor of Pharmacy

There is a clear mission that addresses five major core values which is to be the leading School of Pharmacy that brings the health sector in Mongolia up to international standards. The study programme in Pharmacy integrates very well into the mission statement and overall strategy of the HEI.

The School of Pharmacy has successfully integrated education, research, and industry through its collaboration with practical training pharmacies and pharmaceutical manufacturing facilities.

This provides students with valuable hands-on experience and aligns academic training with real-world industry practices, enhancing the quality and relevance of the education provided.

Regarding the main objectives/learning outcomes of the study programme, there is a strong and precise seven-point competency framework in the curriculum, which will enable the graduates to work in various important areas of the health system both in terms of public health care and in the pharmaceutical industry and research institutions. There is a 100% employment rate of graduates.

The structure of the programme (curriculum) in general clearly contributes to the achievement of the defined competencies. Especially commendable is the focus on clinical pharmaceutical care, including monitoring and evaluation of drug treatment among other objectives, in the curriculum as this aspect has a significant impact on the safety of medication and thus contributes to public health care.

For students pursuing a degree in pharmacy, elective courses are offered based on their chosen area of specialization. This allows students to select subjects that align with their professional interests and goals. For example, there has been an increasing interest among pharmacy students in elective courses related to cosmetic product technology. This reflects a growing demand for specialized knowledge and supports the flexibility of the curriculum to meet students' evolving interests.

Ethical issues in this regard will be considered. Pharmacists are not only responsible for the provision of medicines but also for their competent use (patient-centered care) and the provision of drug-related information to the public. In this respect, the structure of the programme contributes to meet the defined objectives. The objectives/learning outcomes reflect adequately the requirements from the professional field as well as the demands on the Bachelor level.

The possible career opportunities for graduates have well been defined in the programme and are adequate and the study programme reflects the four purposes of higher education of the Council of Europe.

The student workload is appropriate, well defined and transparent. The required internships are well structured and give the opportunity to experience different areas of pharmaceutical practice. The HEI provides support in finding positions in public pharmacies as well as in the clinics and pharmaceutical companies.

The goals and objectives of the programme are based on feedback from students, teaching staff (faculty) and external stakeholders.

To further enhance the current programme, and to reach the strategic goals of being the leading school of pharmacy in Mongolia and to reach an international level, teaching in English should be a priority for the future curriculum development. The School of Pharmacy has already started planning for this.

In line with this goal, international cooperation for both the students and the teaching staff should be developed further and thereby increase opportunities for student and staff mobility. The university is also already planning for this.

It is also recommended to increase the proportion of pharmacy-specific courses. Currently, approximately 40% of the curriculum focuses on basic biomedical courses. The percentage of courses related to pharmacy could be increased further to better align the programme with industry-specific demands.

According to the development policy of MNUMS-2030, the School of Pharmacy will launch a Pharmacy programme in English for the coming 5 years. Therefore, the school has been doing needs assessment and capacity building for teaching in English.

2.2.3 Online Master's Programme in Medicine

The Online Master's Programme in Medicine at the Mongolian National University of Medical Sciences (MNUMS) aligns strongly with the university's "Development Policy-2030," which emphasizes international standards, innovation in educational technology, and increased accessibility to quality medical education. This programme is well-integrated into the mission of MNUMS to train globally competitive healthcare professionals, particularly by offering an accessible learning model that serves both urban and remote areas of Mongolia, thus addressing critical workforce shortages in rural regions.

Also, the study programme reflects the development policy of MNUMS very well because the courses to be completed provide the knowledge to turn doctors of medicine into critical professionals equipped with adequate scientific tools and personal skills. Graduates develop their careers not only in hospitals, private practices, and public health facilities but also in further studies (PhD) at universities and research facilities. The knowledge, skills, and competencies acquired during the programme for further professional work in whatever field are adequately taught and tested. The programme mirrors the four purposes of higher education of the Council of Europe in preparing for sustainable employment, personal development, active citizenship, and creating a broad advanced knowledge base, and stimulating research and innovation. On the other hand, the Online Master's Programme in Medicine supports MNUMS's mission to provide high-quality, accessible medical education and continuous professional development.

The development and periodic revision of the programme demonstrates its alignment with MNUMS's strategy to create a sustainable, internationally comparable academic environment, a goal underpinned by structured feedback from stakeholders and comparisons with global standards.

During the site visit and stakeholder interviews it was found that the updated programme content was based on stakeholder feedback, with input being gathered through surveys and biannual discussions. This engagement fosters a responsive educational framework that aligns with both academic standards and labour market needs. Skills acquired by the graduates are highly valued, as reported by employers and graduates during the site visit. They want to encourage the doctors they employ to complete this study programme in the future.

Since its initial implementation, the Online Master's Programme in Medicine curriculum has undergone several revisions, whereby both the content of the courses and the credits have been adapted to local and international requirements. MNUMS's commitment to high educational standards ensures that learning outcomes support professional competency and align with career trajectories for medical professionals.

The curriculum changes are based on intensive collaboration between the relevant curriculum sub-committee, which also includes student representatives, the curriculum commission and other stakeholders. The President of the MNUMS approved the curriculum changes. The curriculum development of the Online Master's Programme in Medicine at the MNUMS also benefits from external expertise and reference points and corresponds to the participatory standards and of the European Higher Education Area, as well as local laws and regulations.

In summary, curriculum development at MNUMS indicates a well-defined formal institutional approval process.

According to the "Regulations on Compliance with Credit Hour Equivalence," approved by Annex 1 of Order No. A/348 of the Ministry of Education and Science (October 6, 2021), "Commonly Used Credit Hour Ratios" state that 1 credit hour in Mongolia is equivalent to 2 ECTS credit hours. Based on this regulation, the Online Master's Programme in Medicine corresponds to 70 ECTS credit hours. This credit allocation meets the standard European framework for master's programmes, typically requiring between 60-120 ECTS credits depending on the programme's depth and duration. By aligning with ECTS, MNUMS ensures that its Online Master's Programme in Medicine is comparable with programmes in the European Higher Education Area, enhancing its international recognition and supporting student mobility.

However, in the currently valid curriculum, eight parallel courses with 12 credits must be completed over 16 weeks in the first semester. This corresponds to 576 hours and 36 hours per week, which must be taken in addition to regular work. The workload for courses in the second

and third semesters is only half as much. In the fourth semester, three elective courses with six credits must be completed. After successful completion of the integrated final exam, the research proposal must be completed with five credits, which corresponds to a workload of 528 hours over 16 weeks in the fourth semester. Looking at these facts together, the workload of this degree programme seems to be somewhat unevenly distributed. The university is already implementing changes and has developed a new methodology to assess workload of students.

During the site visit it became clear that the two different master programmes in Medical Sciences taught at MNUMS (in campus vs. online programme) are not equivalent. While the in-campus version requires students to write a master thesis, the online version requires students to write a research proposal. This involves students demonstrating their ability to work on topics independently using scientific research methods. This is in accordance with the 'General Criteria for Postgraduate Education Programmes', Order of Minister № 370, Minister of Education and Science, as well as the Order No A/28 of the President of MNUMS.

In addition, various designations are used for the Online Master's Programme in Medicine. A working group is currently solving this issue across all public information sources.

Key information, such as attendance regulations, is presented in various documents. The information is only partly in English, although the Online Master's Programme in Medicine is intended to appeal to international students. After the conference, the university informed that the central document is the "Student Guideline". A table outlining the differences between the professional and research master's programmes has been added to the guideline. Additionally, study-specific information has been included on the Graduate School's website to provide clear and accessible information for newly enrolled students and other users.

Overall, the Online Master's Programme in Medicine at MNUMS is a well-structured and forward-looking initiative that reflects the university's commitment to accessible, high-quality medical education. MNUMS is further elevating the programme's impact, meeting both national needs and global healthcare education trends.

2.3 Conclusion

The criterion is **fulfilled**.

Programme-specific recommendations for study programme "Pharmacy" (Bachelor of Science)

1. The school should further develop international collaboration for student and staff mobility.
2. The proportion of pharmacy-specific courses should be increased.

3 ESG Standard 1.3: Student-centred learning, teaching, and assessment

Institutions should ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach

3.1 Implementation

3.1.1. Bachelors of Dentistry and Pharmacy

The Dentistry and Pharmacy programmes at MNUMS employ a variety of teaching and learning methods to ensure the acquisition of knowledge, skills, and attitudes necessary for effective practice. The predominant delivery modes include classroom teaching, e-learning, and blended learning. The programme utilizes pedagogical methods such as case studies, discussions, problem-solving, evidence-based analyses, clinic and model-based simulations, and hands-on activities. The "SPICES" methodological model (Student-centered, Problem-based, Integrated, Community-based, Elective, Systematic) is predominantly used for seminars and practical courses.

The programmes employ student-centered pedagogical methods such as case studies, discussions, problem-solving, evidence-based analyses, and clinic and model-based simulations. These methods actively engage students in the learning process and encourage critical thinking and application of knowledge.

The programmes are designed to meet the diverse needs of students, ensuring mutual respect in the learner-teacher relationship. Group tutors are assigned to provide guidance to students, and the curriculum is structured to support students' independent learning and provide them with the necessary information, training, research, and clinical skills.

The assessment system is designed to be unbiased, fair, and transparent, ensuring that students' competencies in knowledge, skills, and attitudes are accurately evaluated. The programme utilizes formative assessment to assess students' performance in specific courses and summative assessment to evaluate end-semester performance. Additionally, a graduation examination is conducted to assess students' theoretical and practical knowledge, skills, and attitudes acquired during their studies.

The methods of teaching are continuously evaluated and improved through a systematic approach to quality assurance. The faculty and administration are committed to revising and improving the programme based on feedback, assessment data, and the evolving landscape of medical education. Additionally, the professional development of teaching staff is prioritized, with regular training and workshops to enhance their pedagogical skills.

The Pharmacy (B.Sc.) has shifted from classroom training to blended learning <http://elearning.mnums.edu.mn/> the system, as of 4 months 2024, has provided students with a total of 76 E-lectures, 215 examination tests, 64 reading materials, 33 exercises, and 25 seminars for courses 1-5 in pharmacy.

3.1.2 Online Master's Programme in Medicine

To implement training effectively at all levels, the student-Centred learning (SCL) approach is applied. The goal of SCL is to "connect students' interests with the training," making the educational process more meaningful and fostering a greater desire to learn.

The Online Master's Programme in Medicine is conducted in four stages: Course study (A), Examination (B), Project writing (C), Defense (D). Given the varying levels of students' online learning skills and technological knowledge, an orientation is organized before the course starts. This orientation provides essential guidance and information on the stages of the training, the structure and operation of the Moodle system, effective engagement strategies, rules and regulations related to the training and defense, evaluation principles, and answers to students' questions.

The courses and exams opened according to the schedule can be accessed by students at their convenience within the specified period, allowing them to learn time management. The flexibility to study courses at any time within the open period makes e-learning student-friendly. As of the first quarter of 2024, an average of 468 ± 106 students log into the system daily, with an average of $10,506 \pm 159$ actions performed per day.

There are 15 different types of activities in the standard Moodle to enable smooth communication with students, check on assignments, grading, real-time synchronous and asynchronous discussion among participants, conducting surveys to collect feedback, a glossary that students can maintain, quizzes and feedback to correct answers. Teachers can gather data from students to help them learn about their class and reflect on their own teaching. Furthermore, the system offers a collection of web pages that anyone can add to or edit.

After completing the professional and elective courses (phase A), students take a qualifying examination generated by random selection of 100 tests online within the Moodle system. A score of 70% or higher is required to pass. Successful students are then granted the right to write a project, and a supervising faculty member from the relevant department is assigned based on students' preferences and directions.

Once the project writing right is obtained and a supervising faculty is assigned, the ICEC (International Cyber Education Centre) develops and approves a calendar schedule for each step leading up to the defense. Students conduct project defense activities according to this approved schedule. Simultaneously, faculties and education officers include these activities in their plans and manage students working at the same level as a cohort, sending necessary information via email and conducting progress discussions and preliminary defenses as scheduled. Before starting the project, an ORIENTATION-2 is organized on how to write the project and how the defense is conducted.

Each master's student writes their project under the guidance of one supervisor, allowing faculties to tailor the training to the unique and diverse needs of each student. This approach acknowledges that students learn at different paces, have varying talents and capabilities, and are at different stages of development.

For students scoring below 70% on the comprehensive exam, remedial classes are organized collaboratively and free of charge by the faculties who teach the subjects. A re-examination is conducted 7 days later.

To ensure clarity for students pursuing the Online Master's Programme in Medicine and to conduct an effective student-centred learning process with continuous feedback, ICEC organizes a large range of activities over the two-year training period, in addition to the official courses and defenses: for example orientation trainings, remedial sessions, progress discussions and journal club to enhance progress, choose appropriate topics, methods, and models, and improve presentation skills.

The student-centred model requires instructors to see each learner as distinct and unique. In student-centred online learning, students have more time to adapt compared to traditional classroom settings. One advantage of online learning is that students can revisit, and review lessons as needed, providing flexibility and reinforcing understanding.

3.1.3 Students' complaints and suggestions handling (all programmes)

The university has established a system for receiving students' suggestions and complaints, as well as responding to and solving issues as necessary. Students are provided with opportunities to express their thoughts about the courses through assignment submission registration forms. The school administration and teaching staff report back to students on the resolution of issues filed by the students. The programme is responsive to student feedback and takes proactive measures to address complaints and suggestions for improvement, such as budgeting for the purchase of dental units, tools, and equipment based on student complaints.

According to Section 4.24.8 of the "Training Technology and Quality Control Regulation" approved as Annex 2 to the Rector's Order No. A/19 dated January 28, 2021, faculties involved in online education are responsible for receiving, addressing, and reporting any feedback or criticisms related to the training to the relevant units when necessary.

Depending on the scenario of the request, students can submit their suggestions, requests, or complaints to the ICEC, the Graduate School, or the Division for Graduate Training Policy and Regulation to resolve the issue.

3.2 Assessment

MNUMS uses a range of teaching and learning techniques adapted to each curriculum, offering a balance of academic and practical instruction. For example, the School of Dentistry incorporates traditional lectures, phantom models, and hands-on patient treatment. The Online Master's Programme of Medicine provides flexibility with asynchronous study via Moodle and planned webinars. The curriculum is designed to blend academic knowledge with practical applications, which is especially visible in fields like pharmacy and dentistry. However, while the techniques are broad and suit various learning demands, student feedback shows a need for additional clinical case studies and problem-solving exercises. The demand for more participatory and solution-oriented education approaches offers room for improvement in this area.

MNUMS has set up a thorough system for assessing and upgrading teaching techniques. Regular student satisfaction surveys are done, and the findings are utilized to suggest areas for improvement. Peer reviews and departmental meetings are used to assess teaching quality, share criticism, and develop teaching techniques. The leader of each department is heavily involved in quality assurance, with frequent assessments and chances for staff growth. However, while these systems are in place, there appears to be considerable variance in how feedback is consistently used across all departments. A more consistent approach to adopting proposed modifications might boost overall teaching quality.

Regulations and criteria for assessment MNUMS has well defined assessment criteria and methodologies, which are published in a variety of rules that students may access. The assessment procedure consists of written exams, practical assessments, and, in the case of the Online Master of Medicine, quizzes and assignments administered via the Moodle system. The evaluation systems are transparent, with students receiving thorough explanations of examination forms and criteria. This clarity ensures that students understand the expectations and have a clear path to follow.

The assessment forms at MNUMS are well-suited to the targeted learning goals. For example, dentistry students take practical tests that require them to demonstrate clinical abilities, whereas pharmacy students take laboratory-based evaluations. The emphasis on practical training guarantees that students are assessed in real-world settings, which is critical for their future professional jobs.

The Pharmacy programme is student-centered, focusing on case-based learning, problem-solving, and encouraging students to develop critical thinking skills. In addition to courses in pharmaceutical economics, marketing, and pharmaceutical technology, students also complete internships at specialized institutions such as supply chain organizations, pharmacies, and hospital pharmacy departments. This approach ensures that student-centered learning is of high quality and accessibility, providing students with practical experience and fostering professional skills in real-world settings.

With regards to the Pharmacy programme, approximately 25% of lecture-based courses are delivered online, while 75% are conducted in traditional classroom settings. Additionally, a certain portion of practical courses is structured as independent assignments. The educational approach prioritizes fostering student autonomy, problem-solving abilities, teamwork, role-playing, peer teaching, and case-based learning. These flexible teaching methods promote active student engagement, encouraging them to take responsibility for their learning process. The ability of students to develop knowledge through hands-on practice and practical experiences is a significant strength of the programme. This approach not only supports the development of critical thinking skills but also prepares students for real-world challenges in their field.

3.3 Conclusion

The criterion is **fulfilled**.

Recommendations:

- The university should develop more participatory and solution-oriented education approaches and integrate additional clinical case studies and problem-solving exercises into the curricula.
- Quality assurance cycles on teaching quality should consistently result in the provision of feedback regarding the potentially applied modifications to boost overall teaching quality.

4 ESG Standard 1.4: Student admission, progression, recognition, and certification

Institutions should consistently apply pre-defined and published regulations covering all phases of the student “life cycle”, e.g. student admission, progression, recognition and certification.

4.1 Implementation

4.1.1 Admission

Bachelor studies

The admission process for undergraduate studies is aligned with the standards set by the Ministry of Health and the national standard MNS 5323-127:2012. This ensures that the programme complies with the professional requirements for graduates. The admission process is organized in a structured and transparent manner. It begins with the General Entrance Examination (GEE) organized by the Education Evaluation Center. Prospective students who have completed general secondary education are eligible to take the GEE. The entrance examination is held twice a year according to the regulations, organized by a working group approved by the Rector's order. Applicants take the exam online. The examination consists of 100 quizzes assessing professional knowledge, English language proficiency, and digital computer skills.

The number of admissions is determined based on the faculty's workload for that year, and students are admitted based on the exam results and meeting the requirements. The GEE scores are used as a basis for student recruitment by MNUMS and other higher education institutions (HEIs).

The admission criteria are based on the GEE scores, with specific requirements for subjects such as chemistry and biology. The programme ensures that students admitted meet the necessary entrance score criteria.

Starting from 2019, the registration process for MNUMS has been organized online throughout the country. This online registration system provides accessibility and convenience for prospective students to apply for admission to all programmes.

The final decision on the number of entrants (admission quotas) to undergraduate programmes is made by the MNUMS Governing Board. The quotas are reviewed based on the demands of urban and rural areas, ensuring equitable access to education.

The MNUMS Admission Commission, appointed by the MNUMS President's order, takes responsibility for organizing and administering the admission of new students. The commission oversees the entire admission process, ensuring fairness and transparency.

Master studies

The admission and graduation process for graduate studies at MNUMS is continuously organized based on various regulations and directives. These include the following:

- Article 4, Section 2 of the "Higher Education Law" of Mongolia
- Ministerial Order A/370 on "Approving the Professional Directions, Indices, and Regulations for Master's and Doctoral Programmes, and Amending Regulations"
- Ministerial Order A/160 on "Updating and Approving Professional Directions and Indices"
- Ministerial Order 113 on "Regulations for Enrolling Foreign Students"
- MNUMS Charter's Articles 5.1, 5.4, and 9.2
- Rector's Order A/28 on "Regulating Graduate Education Activities"

Graduate programme admissions are organized by the Division for Graduate Education Policy and Regulation (DGEPR) within the framework of its main activities. To facilitate the admission of doctors and medical professionals working in remote areas who have limited access to in-person admissions, registration for the master's programme is conducted online through the MNUMS and DGEPR websites (<http://gp.mnums.edu.mn/>, <https://mnums.edu.mn/>) and their Facebook pages. Detailed information about the admission period, directions, registration process, and examinations is announced publicly in both English and Mongolian for 30 days.

For the Online Master's Programme in Medicine, domestic applicants must hold a bachelor's degree in medicine, have an education certificate obtained from the e-Mongolia system (<https://e-mongolia.mn/>), and must pass an entrance exam. International applicants must have their Bachelor diploma recognized and officially translated into English additionally.

The number of admissions is determined based on the faculty's workload for that year. Applicants who meet the admission requirements are assigned an identification code and take the exam online (<http://mdl.mnums.edu.mn/gpm>).

The entrance exam consists of 100 quizzes assessing professional knowledge, English language proficiency, and computer skills. Before the exam, applicants receive their login credentials and exam instructions via email. Detailed information about the entrance exam is provided through the gp.mnums.edu.mn website and via email.

Student transfers between Master programmes are managed according to the "Regulation on the Organization of Graduate Studies" (Order A/28) issued by the Rector of MNUMS. MNUMS offers master's programmes both online and in-person. Students can switch between online and in-person formats within the same discipline and transfer their completed credits. If a student changes their discipline, they can adjust their programme by accounting for the differences.

4.1.2 Progression

Bachelor studies

There are two semesters for 16 weeks each in one academic year. The first (fall) semester starts in the first week of September and ends in the third week of January and the second semester (spring) starts in the second week of February and finishes in the end of June. Final examinations are managed in the end of the course. The required course must be completed during the winter and summer vacation programme of the following semester.

The programmes place a strong emphasis on monitoring the retention rate of students to ensure their successful progression within the programmes. The retention rate is a key success indicator, and efforts are made to provide support to students for successful progression. The data provided by the university show that out of 603 students that were transferred into the final year in the past 5 years, only 10 did not complete their studies in the same year.

Internships are usually conducted in both state and private (dental) clinics. Prior to this, they have workshops where internship guidelines and requirements need to be fulfilled. Upon completion of the internship, all students have to present outcomes of the internship to the department's Defence Commission using the internship book filled out (hands-on activities and tasks) as evidence.

Students are allowed to get a year leave if they submit a request stating their reasons. Most common reasons for a year leave are health and financial issues and maternity leave. In the last 5 years, there were 16 students in the Dentistry cohort that had a year leave, and they all got back to the programme.

Online Master's Programme in Medicine

Students enrolled in the Online Master's Programme in Medicine must complete a total of 35 credit hours over two years. In the first two semesters, students take eight core courses (12 credits) and three specialized courses (6 credits). During the third semester, they complete three additional specialized courses (6 credits) along with three elective courses (6 credits).

Depending on the specification of the course, the instructor determines the number of independent assignments and quizzes. This is specified in the student handbook, which students are expected to read and familiarize themselves with before beginning the course.

Out of 8 professional courses, 6 have independent assignments. Out of 6 specialized courses, 2 included independent assignments. Among the 14 courses (both professional and specialized electives):

- 1 course has 5 exams.
- 2 courses have 4 exams.
- 2 courses have 3 exams.
- 9 courses have 2 exams.

Exams will be conducted during the specified opening period. Exams can only be retaken if a timely request is made. Students can view their grades for the individual courses in the moodle system.

ICUMS believes that attendance is very important for success in a student's degree programme. Attendance for one week during the semester is defined as the student having viewed each posted material for the week at least one time during that week. This includes viewing PDFs, lecture, videos, readings, and any other materials posted for a particular week. The e-learning system keeps a record of the students' viewing of these materials, so that at the end of the week the teacher will know if the student has viewed all materials or not. If the student has not viewed all materials for a particular week, they will receive a zero for attendance for that week. The student must have credit for attendance for two thirds of the weeks for a course. This means that if the semester is 12 weeks, they must have attendance for at least 8 of these 12 weeks. If the student does not attend for at least two thirds of the weeks of the course, they will receive a failing grade for the course and need to re-enrol in the course and pay for the

course again. Even if with a low attendance the student could achieve a passing grade according to the course's grading criteria, the student still cannot pass the course without fulfilling the two-thirds requirement.

Retaking of the course is allowed only once, and its fee is equivalent to 25 percent of that course credit hours. If a master's student receives a grade below 70 percent in the re-examination, 50 percent of the credit hour fee for the course will be paid and the course will be retaken.

Students who have taken a leave of absence or have legitimate reasons can make up missed lectures, practical sessions, and seminars without additional fees, according to the "Training Technology and Quality Control Regulation".

Upon completion of all courses by the third semester, students are eligible to take the „Integrated Final Examination“. Those who score 70 or above on the exam can then choose their research project topic and supervisor in collaboration with relevant schools and departments.

For graduating students, a course on writing research projects is offered on the learning management system. This includes additional materials and schedules for research methodology courses. The progress discussions and preliminary defences of research projects are organized online by the ICEC, while the final defence is conducted in person by the Graduate Academic Council. Students can request to participate in the defence online if needed.

If a student fails to attend classes or takes a leave of absence for valid reasons, their enrolment status can be reinstated by order, allowing them to resume their studies. Students who fall behind in their coursework can take makeup exams to catch up and are then eligible to take the comprehensive graduation exam. Those who pass the comprehensive exam are assigned a supervisor to help them write their research project according to a planned schedule. If the student does not write the proposal by the scheduled time, the course shall be studied again in the next semester.

DFE and DGEPM will approve retake fees for lectures, practices, and seminars.

Retaking of the course is allowed only once, and its fee is equivalent to 25 percent of that course credit hours. If a master's student receives a grade below 70 percent and a doctoral student 80 percent in the re-examination, 50 percent of the credit hour fee for the course will be paid and the course will be retaken.

In the case of restudying the course, the full fee for the credit hours will be paid.

4.1.3 Recognition and certification

Bachelor programmes

A student who completes general foundation, basic professional and specialization courses, and completes all types of medical internship is eligible to take the graduation examination. The examination that comprises of two forms - assessment of theoretical knowledge and skills development, is held at the end of each academic year. The first part takes a form single or multiple-choice, true-false and matching tests and the second one is OSCE. If a student gets lower than 70 points (D or F) on their final exam, they are allowed to re-take at the beginning of the next academic year. A student who does not take the final exam due to valid mitigating reasons has the right to re-take it within the next 2 years.

All graduation procedures are regulated in accordance with the higher education diploma issuing procedures and diploma models approved by the MOEAS. By the decision of the Professional Graduation Commission, the students who meet the requirements are awarded a bachelor's degree diploma, a badge, and a doctor's seal by the Order of the President of MNUMS. The diploma indicates name\surname of the graduate, profession\programme title, educational degree, state registration number, and diploma registration number. In the appendix, the graduate's name, registration number, professional title, total number of credits, GPA, courses and their related credits, and grades for each course and final examination are indicated. The appendix is certified by the seal of the University and signatures of the President and Director of the Undergraduate Education Policy and Management Department. The diploma and its appendix are issued in Mongolian and English languages, and Mongolian traditional script.

The copies of diplomas and its transcripts, decisions of the Professional Graduation Commission and diploma registration numbers are archived at the MNUMS. Graduates' information, such as name\surname, registration number, and diploma number, are registered in the e-database of the MOEAS.

Online Master's Programme in Medicine

Applications for transfer are received and processed in the first semester of the academic year. The DGEPM shall determine the credits corresponding to the courses studied in the case of transfer from other universities. The DGEPM must decide on the transfer of students between programmes and departments on the basis of evidence, and the President of MNUMS must approve this decision. In the event of a transfer between departments and programmes, fees

must be paid in full for the duration of the programme and courses not previously attended must be paid for and taken. The MNUMS President's order will confirm the decision if a student transfers to a domestic or international university after making an official request to the DGEPM. If an international student requests to leave the school or transfer to another institution, the President will make the decision, the Ministry of Education and Sciences will revoke the student's residence permit, and the student will be responsible for paying the associated costs.

Before defending their project, students undergo three stages of discussion. Each discussion is evaluated according to the "Regulation Governing the Activities of Graduate Programme".

Initially, the graduation defense was conducted in two stages: preliminary defense and final defense. Since 2023, a progress meeting has been added, making it a three-stage process, carried out both online and in-person according to the relevant regulations. The ICEC organizes the progress discussions and preliminary defenses.

During the progress discussion, projects are evaluated for completeness, clarity of objectives and hypotheses, appropriate methodology, and proper use of statistical analysis. Feedback is provided to improve the project. If the project meets the essential requirements, it moves to the preliminary defense. If the student does not write the proposal by the scheduled time, the 5 credit- hour course shall be studied again in the next semester.

The preliminary defense involves a broader evaluation by the department's faculty and specialists from relevant fields, consisting of at least seven scientists with a Ph.D. or higher.

The final defense is organized by the Academic Council of Graduate Studies, which includes at least eleven members with doctoral degrees. The council is appointed annually by the Rector of MNUMS and aligns with the university's research priorities. The council ensures a fair evaluation process and suggests improvements to regulations to enhance the quality of education.

The weighting of the independent reviewer's score in the project evaluation was reduced from 70% to 40%, increasing the influence of the council's collective assessment.

The progress discussion stage was introduced to provide additional guidance and support for research methodology before the preliminary defense.

For the final defence, the research project is reviewed by 11 members of the Academic Council appointed by the Rector's Order of MNUMS. The evaluation of the final defence is based on a total of 100 points, divided into three components:

- A. Official review of the research project: up to 40 points
- B. Secret ballot evaluation by Academic Council members: up to 40 points
- C. Progress evaluation: up to 20 points (this includes up to 10 points for presenting and participating in the journal club with one's research project and literature review, up to 5 points for participating in scientific conferences, and up to 5 points for making corrections based on feedback from progress discussions). This evaluation is provided by the Centre implementing the training.

At the meeting of the Academic Board, the master's thesis will be discussed, reviewed, and decided by secret voting. If the master's student publishes one article on his or her research results in the name of the MNUMS as the 1st author in a journal registered in the Web of Science, Scopus, PubMed database, or as a co-author in a journal with an impact factor of 3 or more registered in the above databases, the master's degree will be awarded by open voting.

If 75% or more of the members of the Academic Board approve the defence, the master's degree will be considered awarded. If the required majority of votes is not achieved, suggested corrections should be made, and the thesis shall be discussed again by the Academic Board.

Original and electronic copies of the master's monograph shall be submitted to the Central Library of Health Sciences.

On March 20, 2024, the Ministry of Education and Science issued Order A/143, which included the updated diploma template in its fourth appendix. This update also introduced a new formula for calculating the GPA. As part of this reform, graduates' diplomas are now verified with a blockchain-based electronic code, ensuring global recognition of their credentials.

The updated diploma includes the programme name, code, and QR code on the front. The appendix contains additional information about the graduation order.

4.2 Assessment

Admission

Various laws and ordinances precisely define the admission process for the bachelor's programmes and the Online Master's Programme in Medicine. The questions for the general entrance examination are adapted to the required prior knowledge of the respective study programme, are randomly selected from a pool and regularly evaluated and adapted or renewed. The process is communicated in a comprehensible way, as was also confirmed by students from all degree programmes during discussion rounds with students.

The process and responsibilities at MNUMS are clearly defined and structured, aligning with national standards set by the Ministry of Health and the relevant legislation. The procedures governing MNUMS undergraduate training activities (PGPTA) have been revised multiple times (2021, 2022, and 2024) to reflect public health needs.

MNUMS adheres to the Lisbon Recognition Convention, providing transparent admission procedures that allow for equitable access to education for all applicants, including those from different educational backgrounds ("open admission practices").

Applicants must score more than 480 points in the general entrance examination to be considered for admission. The institution ensures that information about admission processes is readily accessible through its website and social media platforms ("eligibility criteria").

MNUMS organizes comprehensive orientation sessions to help new students acclimate to the academic environment, providing essential information and resources for their success ("Orientation for New Students").

Progression

The dropout rate for bachelor's programmes is extremely low (<1% of enrolled students) within last 6 years. The low dropout rate implies that the students take their studies seriously and that the programmes are very well designed.

MNUMS has established effective policies and procedures for monitoring student progression within its undergraduate programmes. The institution regularly collects and analyzes data on student performance, enabling the identification of those requiring additional support. This proactive approach includes interventions such as tutoring and academic counseling. The requirements for progression are communicated to students through various channels, ensuring they are well-informed about the criteria necessary for advancing in their studies.

During the site visit at MNUMS, the progress of the students in the Online Master's Programme in Medicine was discussed. The courses that require online attendance take place in the afternoons and evenings. Teachers support students via a variety of channels, such as telephone, e-mail, Zoom meetings, etc. Examination deadlines can be extended at the request of students. Some students can't complete a course in time. If students don't study materials in time,

they must retake the course. If after 16 weeks students have not studied more than 25% of course materials, they have to retake the course for new payment. Attendance and participation of students are registered, because students have fixed assignments that need to be completed per week. Examinations can be repeated once. This occurs more frequently in courses involving statistics.

The figures provided by MNUMS show that 1,145 students were accepted onto the Online Master's Programme in Medicine during the academic years 2018/19 to 2021/22. Of this cohort, 315 (27.5%) students completed their studies within the prescribed period of study. During the same period, 46 students were enrolled into the in-campus master's programme in Medical Sciences, of whom 30 (65.2%) completed their studies on schedule. This is even more surprising given that a master's thesis must be written for the in-campus programme and only a research proposal for the online programme.

The high dropout rate may be due to financial constraints or changes in local circumstances or work overload. However, the unevenly distributed workload within the course could also play a role (see also 2.2.3.) Close attention should be paid to this issue in the future.

Recognition

MNUMS has a robust recognition procedure in place, compliant with the Lisbon Recognition Convention, facilitating credit transfers for students with previous qualifications or relevant experience.

MNUMS implements appropriate procedures for recognizing prior learning. The university follows established guidelines to ensure that prior learning and qualifications are acknowledged, promoting inclusivity and diversity within the student body.

MNUMS offers master's programmes both online and in-campus. Students can switch between online and in-campus formats within the same discipline and transfer their completed credits. If a student changes their discipline, they can adjust their programme by accounting for the differences. The core courses are consistent across all master programmes, so switching in the first year does not require additional adjustments. The DGEPR decides on student transfers within the MNUMS and domestic universities upon request. The decision is approved by the President of MNUMS.

The transfer of students to other Mongolian universities as incoming and outgoing students and the associated necessary recognition of academic achievements is precisely regulated. It is possible to change your degree programme on request within the university without losing any credits.

4.3 Conclusion

The criterion is **fulfilled**.

5 ESG Standard 1.5: Teaching staff

Institutions should assure themselves of the competence of their teachers. They should apply fair and transparent processes for the recruitment and development of the staff.

Standard 6, criteria 6.3

Scholarly activity of the lecturer

The lecturer undertakes scholarly activity that is academically sound and capable of exerting a significant impact on programme implementation. The results of such research are instrumental in enhancing the efficacy of the programme.

5.1 Implementation

5.1.1 Current staff levels

Depending on academic degrees, length of service and academic and research contribution and recognition, faculty members are employed in job positions, universally accepted throughout all departments, as a professor, an assistant professor, a senior lecturer, a lecturer, and an assistant lecturer.

To be awarded an academic title, faculty members must meet ten criteria, which include conducting research and tenure at the university. The first criterion specifies a minimum tenure of ten years at the university, supervising three classroom-based or ten online master's theses, and reviewing nine master's research projects.

Faculties at MNUMS operate within five main levels of position and are assigned a total workload of 1,600 score (hours) per academic year, divided into three primary areas: teaching, research, and professional activities. Regardless of their position, faculties are expected to fulfil this workload over the course of 40 weeks, averaging 40 hours per week. The distribution of workload is structured to ensure a balanced approach to teaching and professional development, meeting the requirement that working hours should not exceed 8 hours per day.

Faculties dedicate an average of 600 score to direct teaching activities. This includes classroom instruction and other student-facing educational efforts. On average, 300 score are allocated to the preparation of lessons and monitoring student progress. Faculties spend approximately 1.5 hours per day on these tasks. The remaining 700 score are devoted to research and other professional activities. Faculties typically spend 3.5 hours daily on research projects,

professional development and related activities, maintaining a balanced workload while contributing to various critical aspects of their role.

Bachelor of Dentistry

The Bachelor of Dentistry has been implemented by the School of Dentistry in collaboration with four other schools of the university. As of September 2022, a total number of 94 faculty members were employed on a fulltime basis and perform teaching in the programme. As concerning the length of service, 19% of them has 1-5 years, 31% has 6-10 years, 18% has 11-15 years, 15% has 16-20 years, 7% has 21-25 years, and 10% of them has more than 26 years of teaching experience. 58,8% of teaching staff holds a doctoral degree, the rest is having a master's degree, and 36% of them hold professional degrees. Professional degrees are awarded upon successful pass of the medical doctor's proficiency examination organized jointly by the National Centre of Health Development and the Association of Dentists (decree A\513 of the Minister of Health, 2019). In accordance with the Labour Law the annual workload for every faculty is 1600 hours (40 hours per week) and this is calculated by teaching, research, and additional professional and social activities for the university staff.

Comparing to 2016-2017 academic year, number of senior lecturers is increased by 7%, while the number of assistant lecturers decreased by 5%. In the last 5 years 64,7% of School of Dentistry lecturers of departments who are teaching professional foundation and professional courses obtained their professional degrees (compared to 57.5% in 2016). And the number of advising doctors increased by 5.9% and the number of senior lecturers by 11.7%. Over the last 5 years, 2017-2021, 17 people have been newly employed by the SoD.

Bachelor of Pharmacy

The School of Pharmacy has a total of 28 teachers, 1 methodologist, and 6 staff members. In terms of academic degrees, there are 3 professors, 5 associate professors, 3 doctorates, 17 masters, and a total of 697 students. 16% of staff have 1-5 years of work experience, 15% have 6-10 years, 18% have 11-15 years and 9% 16-20 years. 43% of staff have 20 years or more experience.

The School of Pharmacy implements Bachelor of Pharmacy with more than 70 teachers from School of Biomedicine, School of Medicine, and School of Public Health of the MNUMS. The institution operates with a Management Team of Administration, Academic Council, Council of Department Heads, and Programme Sub-committee, as well as 4 main professional departments and 5 practice bases.

In the School of Pharmacy 100% have academic degrees above Master's, and 65% (49) have doctoral degrees.

Online Master's Programme in Medicine

The International Cyber Education Centre (ICEC) operates under rules and regulations of MNUMS educational office, facilitates online master's programmes through collaboration with professors and faculty members. ICEC continually enhances these programmes by innovating with Moodle and integrating traditional and modern learning technologies. The Centre is managed by a team of 7 staff members, structured according to MNUMS's directives: comprising of a department head, 4 education officers, and an information technology specialist. The teaching staff consists of full-time, contract (adjunct), and guest faculties. Currently, the Online Master's Programme in Medicine course employs two contract and two guest lecturers.

Concerning the length of service, 5.5% have been with the university for 1-5 years, 11.1% for 6-10 years, 55.5% for 11-15 years, 22.2% for 16-20 years. 11% have above 20 years of employment history with the university.

5.1.2 Recruitment

The teaching staff recruitment is organized in accordance with the MNUMS Internal Rules, the Golden Rules of Teaching Staff (Appendix 7), and the MNUMS Regulation on Teaching Staff Performance Evaluation (Appendix 9, order A103 of 2021) aligned to the relevant provisions of the Law on HE, the General Requirements for Teaching staff of HE institutions approved by the Minister of Education and Science (order No. A/270 of 2020, MOEAS).

The teacher recruitment is held twice a year. The schools and departments collaborate to determine their needs in staff and file their requests to the University Teacher Development and E-Learning Department and Administration and Human Resources Department that are the key units for organization of the selection procedure in three stages. Firstly, the general requirements for applicants are announced via the university website and they include having to hold at least a master's degree, completed specialization programmes in the subject field, minimum of 3 years work experience in clinical field, and an advanced level of English Language.

Those who meet general requirements take examinations on professional knowledge and skills, English proficiency and Professional Ethics. Successful candidates are eligible for an interview. The personal documents and results of exams and interviews are to be presented to the MNUMS President for the final approval. In accordance with MNUMS Internal Rules,

employment agreement with the university is made with the selected ones (provision 3.1.3 of the MNUMS Internal Rules (Appendix 21), approved by decree 002 of the Governing Board, 2020)

Starting from 2020, due to the pandemic, the requests supported by required documents for the selection have been received online and the exams are organized online, too.

5.1.3 Professional development of teaching staff

The MNUMS has been implementing the Teaching Staff Development Programme. The Teacher Development Centre (TDC) that functions under Teacher Development and e-Learning Department, takes responsibility for developing and offering a wide range of teacher development workshops and training programmes to address teachers' needs (27 in the last 5 years) in cooperation with domestic and foreign partner institutions. Each academic year the unit develops the plan of activities and openly announces via university website.

Apart from regular training activities, the newly recruited staff, is required to 4-credit orientation training focused on the University legal environment, specifics of adult learning, and assessment. So, during the period of 2017-2021 a total number of 110 newly recruited staff including 17 faculties employed by SoD had this training.

70% of MNUMS faculties' annual workload is fulfilled by actual teaching and teaching\learning related practical activities. Giving an importance of improving professionalism of practicing medical workers in the country the staff is actively involved in professional development certificate trainings as tutors and trainers. For instance, in 2020, during the pandemic, more than 6,000 medical doctors from both urban and rural areas were involved in e-training programmes. The training materials and videos are placed in the UNIMIS system which allows anyone interested to study and use materials.

In accordance with the Regulation approved by order A/93 of the President of MNUMS in 2019 the full-time teaching staff is eligible to receive the incentives during their career from the MNUMS Science and Technology Support Fund, for example when performing additional (part-time) duties by the request of the University, or for attracting investments such as projects and programmes.

Regular evaluation of faculty members is based on their workload performance. It is usually done twice a year – at the end of each semester – by submitting their performance evidence profile. The evaluation is executed in relation to the workload of teaching staff - that is for

teaching, research and, additionally, for their professional and social activities. External evaluation or attestation is carried out as external evaluation and is assessed by Teacher Appraisal Council, students and chairs of departments. Intervals between assessments differ depending on the job position of faculty members.

ICEC actively engages faculty and education officers in ongoing training and enhancement of learning activities and technologies. For instance, ICEC collaborates with the University of Southern California (USC), particularly in teaching and research.

In efforts to advance the Moodle system's development, faculties using the system receive comprehensive training and recommendations from the ICEC team. This training includes analysis of learning techniques, system utilization levels, and capacity, ensuring educators are well-prepared to leverage the learning platform effectively.

5.1.4 Ensuring a link between education and research

The research experience of faculty is crucial for enriching theoretical and practical courses giving more insights into the issues of the field. The number of citations of academic works and research of Bachelor of Dentistry lecturers is increasing from year to year: by 528 in 2016, 723 in 2017, 1043 in 2018, 1298 in 2019, and 1604 in 2020, 496 in 2021 and 2022. When compared to 2015 (when it was 1343) the number of citations increased by 3.9 times, the number of research projects by 1.6 times, and the number of articles published in internationally accepted journals twice.

5.2 Assessment

The institution pays great attention to the competence of its teaching staff. This is achieved through the following measures: (1) The teaching staff for both the master's and bachelor's programmes are appropriately aligned with the scientific field and the number of students, ensuring adequate coverage and expertise based on programme specifics. (2) The university undertakes competitive, diligent and transparent recruitment of teaching staff in five main levels of positions according to the academic degree, length of service, and research recognition. (3) The professional development of the teaching staff is carried out through a well-defined programme offering a wide range of activities including those offered by well-renowned foreign partner institutions (e.g. Harvard University, University of Southern California (USC), etc.).

Through international collaborations, staff members have access to both long-term and short-term training courses, as well as research-focused programmes to further their expertise. However, there is a need for increased financial support from both the Mongolian government and MNUMS to expand and enhance the availability of these qualification opportunities. This would help ensure that staff remain up to date with the latest developments in their respective fields, contributing to the continuous improvement of the institution's academic and administrative quality.

Also, ICEC takes an active role in training and enhancing learning activities and technologies for professional development and educational innovation for faculties and it assumes collaboration with a prestigious institution like the University of Southern California (USC) for both teaching and research capacities. Attention is paid to "research-based teaching".

Furthermore, newly hired staff are required to complete a special orientation training. MNUMS offers ongoing professional development through its Teacher Development Center, which supports and enhances teachers' instructional methods and professional competencies. Additionally, a one-month training course on teaching methods and skills is provided for new faculty members, after which they receive a New Teacher Certification.

Teaching staff have access to e-learning tools and materials and receive appropriate support. The efforts to enhance the Moodle system through comprehensive faculty training by the ICEC team are commendable. This initiative significantly contributes to building a well-prepared teaching force capable of integrating technology effectively into their pedagogy, aligning with the institution's commitment to continuous improvement in digital learning strategies.

During interviews with faculty members, they expressed satisfaction with the institution's incentive structure, highlighting that adequate rewards are provided for publishing research in international journals. This demonstrates the school's strong support for academic productivity and research excellence. It would be particularly beneficial for faculties to incentivise publishing in high-impact journals financially. It could also be very beneficial to enhance recognition and rewards for faculty innovation, for example by increasing awards and incentives for faculty members who create new products, innovations, or research outcomes with the aim to motivate and recognize the efforts of the teaching staff in advancing the field.

There is a regular evaluation of the teaching staff which is well-structured and transparent and is performed both by internal and external stakeholders.

This expert believes that the HEI is doing a good job in addressing the above issues as evidenced by the highly motivated teaching staff, especially the young ones. However, special attention should be paid to the workload of (young) teachers. Teachers should have sufficient time for research and publications in addition to their teaching duties. The workload of teachers should be evaluated in shorter cycles. Teachers should have the chance to evaluate the working atmosphere, the student behaviour and the workload regularly. An evaluation programme for teachers and employees should be established, e.g. three times a year would be helpful to have a consistent overview about the situation. Furthermore, the teachers should get the chance to have enough time for scientific work next to academic and clinical work. The workload is already high, so recruitment of new staff, especially in the field of dentistry, is necessary to guarantee the possibility for bed side teaching, science and research. The university is currently working on reviewing whether teachers have sufficient time for publications in addition to their teaching activities and revising the workload plan and evaluation in shorter cycles.

Furthermore, regarding the teaching staff and their professional development both the international staff should be increased as well as the mobility of Mongolian teaching staff to visit universities abroad. This will broaden the academic and professional horizons of students, faculty, and staff alike, enhancing their expertise and importing valuable knowledge and skills to the institution. According to the university, the numbers were low during the Covid-19 pandemic and are now on a higher level and will increase further.

Teachers enrolled in online master's courses are provided with specific guidance on how to design curricula and the university offers guidance to other faculty members on the unique teaching methods required for organizing online courses. This guidance should also cover student assessment methods.

5.3 Conclusion

The criterion is **fulfilled**.

Recommendations:

- The workload of teachers should be evaluated in shorter cycles to regularly review the proportion between teaching and research. In this context, it should be reviewed whether teachers have sufficient time for publications in addition to their teaching activities.

6 ESG Standard 1.6: Learning resources and student support

Institutions should have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided.

6.1 Implementation

6.1.1 Infrastructure

Bachelor of Dentistry

Courses are taught by the School of Medicine and the School of Pharmacy take place in the MNUMS main building. The general foundation and professional courses are held in the School of Dentistry and the Central Dental Clinic. The School is housed in the building which was put into operation in 2011 and the Central Dental Clinic established 2017. Both of them are in the same location. The second building of the School of Dentistry is under construction in the MNUMS main campus at Botanics.

The average area for lecture halls covers 81.51 m² and seminar and practice rooms occupy 32.22 m² on average.

The School of Dentistry building is provided with restrooms for every 20-25 students, water taps and sinks for every 30-35 students, and a locker for 2-3 students. There is a canteen and cameras on each floor. The natural light coefficient meets the national standard and the average temperature is 18-22°C in all rooms. 50% of land around the building is covered by grass and the rest is paved.

Bachelor of Pharmacy

The basic professional courses of students in the Bachelor of Pharmacy are held in the premises of the School of Pharmacy of MNUMS. The School of Pharmacy is located in the Bayangol District of Ulaanbaatar. From May 16th, 2014, it began operating in the newly constructed MNUMS Building 2. The building area of the classroom building is 1261.5m², and laboratories are 758m², the practice base pharmacy and factory is 176m², the average area of the lecture hall is 81.51m², the average area of the practice room is 32.22m². MNUMS SoP has a total of 42 rooms: Faculty room-5, Practice classrooms-16, Lecture hall-2 (144 seats),

Laboratory-5, Pharmacy Room-2, Factory Room-6, Storage room-2, Support staff room-2, Student cafeteria, Fitness room and 4 Treasury rooms.

The MNUMS School of Pharmacy has identified and fully developed the following infrastructure to ensure that it meets the requirements of Mongolian and international law and standards relating to the practice, retraining, research, and professional services in the field of Pharmacy:

- Health and safety-qualified workplaces, relevant facilities, warehouses, and laboratories
- Laboratory instruments, reagents, and other equipment required for testing, storage, and servicing
- Workplace environmental hygiene requirements /MNS 4990:2000/
- Noise norms and general safety requirements /MNS 5002:2000/
- General requirements for workplace lighting norms and measurement methods /MNS 4996:2000/
- Vehicles and mobile communication equipment intended for the transportation of medical waste
- Teachers and employees are provided with workrooms, computers, equipment, fixtures, stationery, and electric heating. The office also has the necessary professional software, using landline, internet, and local networks for the conduct of business services.

One of the advantages of the School of Pharmacy is that it has a pharmaceutical company, "Sudriin Tun" LLC, which has been working regularly since 2014. The plant-based pharmaceutical industry is a stronghold for scientists and teachers to make practical use of their intellectual potential, introduce new technologies generated by scientific research into production, design new medicines using native medicinal plants and mineral raw materials, and adopt new technologies. In accordance with the technological guidelines developed by the teachers at the pharmaceutical factory, 5 drugs have been introduced in production and are being marketed, and in 2020 the Mongolian drug registration period for 4 drugs has been extended.

Online Master's Programme in Medicine

MNUMS offers online master's programmes where students study courses remotely but utilize both online resources and physical facilities like libraries, institutes, and university hospitals for their research projects. As of 2023, educational activities span across 15 buildings totalling

95,076 square meters. A new library complex of 2,952 square meters was inaugurated in April 2024 at the New Complex of MNUMS.

The university expanded its infrastructure significantly, including the opening of the 3rd building in Bayanzurkh district on September 16, 2020, accommodating 1,200 students across 16 floors. The campus area grew from 67,358 square meters in 2018 to 95,076 square meters by 2022, reflecting ongoing development.

To ensure workplace safety and health, MNUMS is vigilant with regular monitoring conducted by the Occupational Safety and Health Officer and the Medical Quality Department.

The e-learning environment at MNUMS comprises three key components: the learning system/software, e-learning materials, and the library. Continuous improvement efforts are underway to enhance coordination, define infrastructure, and optimize operational areas to foster a conducive e-learning environment. Emphasis is placed on ensuring the electronic learning system is user-friendly, structurally sound, secure, and accessible, with robust capacity to support learning and research activities effectively. Library operations are managed using the Koha system.

Infrastructure enhancements across MNUMS include building upgrades and resource allocation aimed at providing a comfortable setting for teaching, research, independent student learning, and faculty research endeavors. The Graduate School, ICEC, and Division for Graduate Education Policy and Regulation are housed at MNUMS's main building, spanning 11,949 m², facilitating coordination and oversight of graduate education activities.

6.1.2 Hospitals and laboratories

Bachelor of Dentistry

Central Dental Clinic

In 2017 the Central Dental Clinic was moved to a new 6-storey building with 35 dental examination rooms fully equipped with all necessary equipment. It operates with six departments that provide clinical services in dental surgery, paediatric preventive dentistry, prosthetic dentistry, maxillofacial surgery, orthodontic treatment, dental hygiene, endodontics, diagnostic imaging and dental laboratory tests.

Mongolian-Japanese Hospital

MNUMS Botanics Campus that occupies 80,000 m² comprises of university hospital and training facilities. The university hospital offers clinical services in some specializations at the national level. It also provides professional and methodological counselling and advice to other medical institutions, conduct research and other academic activities, and organizes undergraduate, graduate and postgraduate trainings. Some practical courses of SoM, SoB, SoD in undergraduate programme are taught in this hospital.

MNUMS Central Hospital

The hospital was officially opened on 19th November 2021. And currently it has been actively used for organizing various types of internships and practical courses for programmes.

Molecular Diagnosis Laboratory (MDL)

The laboratory does COVID-19 infection tests as PCR test for SARS-CoV-2 detection in saliva and nasopharyngeal swab, mutation detection tests, mobile tests, and rapid diagnostic tests. The MDL is actively used for research, analysis and diagnosis purposes which provides a favourable environment for medical doctors and staff to master their professional knowledge and skills. In overall, this enables them to contribute to not only to the development of the professional field, but also support them to become more competitive at the international level.

Bachelor of Pharmacy

Training of the departments involved in the implementation of the programme, the pharmaceutical chemistry laboratory, the medicinal herbology laboratory, the drug design laboratory, the biopharmaceutical laboratory, and the pharmaceutical economics and management training laboratory are provided annually to the school budget with advanced technological equipment and reagents to improve the quality and effectiveness of research work. These include:

Pharmaceutical economics and management training laboratory

The laboratory provides technical opportunities for online training and internet access through the creation and use of a local computer network and a database designed to help the student become a pharmacist with comprehensive competencies, who can be a client, partner, organizer, mentor, continuous student, and expert.

Pharmaceutical chemistry laboratory

The laboratory is engaged in the preparation of specialists with comprehensive competencies to conduct tests on the quality and safety of pharmaceutical raw materials, plant raw materials, tablets, capsules, pellets, nasal drops, Galen preparations, injection solutions, internal pharmacy preparations, as well as imported pharmaceutical preparations following the appropriate documentation.

Medicinal herbology laboratory

The course in herbology aims to provide students with basic professional knowledge on the identification of medicinal plants, primary processing and purification of plant raw materials, analysis of biologically active substances contained in medicinal raw materials, determination of their number, analysis of commodity commodities of medicinal plants, and comprehensive competencies on physicochemical methods of analysis.

Biopharmaceutical laboratory

The laboratory trains and develops a professional approach to the method of determining the bioavailability of drugs by studying how drug activity depends on pharmacological factors, their influence factors, drug equivalents, and their interaction with pharmacokinetics and pharmacodynamics.

Drug developmental laboratory

The laboratory is designed to adapt to the training activities, develop a broad knowledge approach to pharmaceutical production technology, as well as develop a basic knowledge of advanced technologies, fully master the technology for the extraction of various forms of drugs, and develop a basic knowledge of scientific research in the field of technology.

In cooperation with other research laboratories of MNUMS, pharmacology teachers can build on modern equipped laboratories such as the core laboratory, cell culture biotechnology laboratory, and Yonsei laboratory to create their scientific and research work.

Drug testing laboratory

The pharmaceutical chemistry training laboratory under the Department of Pharmaceutical Chemistry and Pharmacognosy of the School of Pharmacy was established by order A/21 of the director of MUHS on February 20th, 2003, to expand its activities and work in the field of pharmaceutical training, research and drug discovery.

Greenhouse for planting medicinal plants

The medicinal herbology course scaffolding project was implemented, and a greenhouse was built for the reproduction of medicinal plants with an investment of MNT 640,500.

Pharmacy

Since 2016, the pharmacy "Erdem Pharm" under the school startup "Sudriin Tun" LLC has been providing pharmaceutical care to citizens. The pharmacy serves as a training base for 4th year students of the course to practice "public service pharmacy".

Pharmaceutical industry

School's "Sudriin Tun" LLC Erdem Pharm pharmaceutical company has produced 4 pharmaceutical drugs introduced into production according to the technological instructions developed by the teachers and in 2023 produced 60,000,000 million MNT, vitamin C elixir and anti flu plus A. The plant serves as a research base for undergraduate students as well as graduate and doctoral students.

6.1.3 Libraries and information sources

The Central Library of Health Sciences (CHLS) on an area of 1598 m² is an online service dedicated to enhancing knowledge and education. It serves scientists, researchers, students, doctors, and medical professionals in the health sector, including rural doctors and medical staff. The library supports learning activities, creating a comfortable and accessible service environment.

The library operates with a total staff of 28 positions, including a director, chief librarian, programmer, cataloguers, and librarians. It comprises eight open reading halls, two academic reading rooms, one periodical reading room, and one foreign book reading room. There are also five main collections and several service units, including a writing fund (three units), e-reading rooms (three units), group rooms (eight units), and a book exchange and editing laboratory (one unit).

Faculties and students have access to the electronic databases such as Research4life and Springer Link. By using their registration codes by logging in <http://library.mnums.edu.mn>. Uploading an e-books and textbooks is possible by selecting a version FlipHTML5 that configured with KOHA programme.

The HINARI database for sharing information and promoting research in the medical field, has been used actively. Instructions how to use the programme are given to all the teaching staff and students. When needed, the library staff helps students in searching for information and downloads the materials as necessary. In 2021 the database has been accessed 22,036 times by faculties and students. In 2023, the database welcomed 710 new users, totalling 1,005 registered users.

The library enriches its collection at the beginning of each academic term by acquiring textbooks assigned to students and responding to demand and needs. Feedback from online readers and surveys of reader suggestions guide the preparation of e-books.

The students of Bachelor of Dentistry use six main coursebooks per semester on average. They commonly receive services in three libraries with 780 seating capacity and 136, 314 book collections.

The library of the School of Pharmacy has one operating facility and provides a comfortable and open service environment to enhance the knowledge of the faculty, researchers, and students at the School of Pharmacy of MNUMS. The library of the School of Pharmacy is composed of two teachers in charge of the library and 2-3 students who are bookkeepers. It also provided pharmacology students with full access to the Central Health Sciences Library.

In the Online Master's Programme in Medicine, while classrooms are not utilized for teaching, students have access to electronic and physical libraries from their second year onwards for research projects, academic conferences, and clinical engagements under the guidance of their supervisors. In the final stages of their research project, students have access to research laboratories that address local workplace challenges.

6.1.4 IT and equipment

The University offers twelve information systems (web servers, e-learning management system, library information system, learning management system, emailing system, content management system, finance management system, hospital information system). They are used in the daily operation of the University. The learning management information system uses the Cloud University Learning System. The local network is connected to the high-speed 1G. At the University level, all computers are connected to an Intranet and high-speed Internet that provides required conditions for education, research, and clinical services. The Wi-Fi network is available in each student's study and meeting areas. For students 10 computer labs with a minimum of 15 computers have been set up for their learning.

All educational operations, including student registration, entrance exams, class attendance per schedule, exams, assignments, and thesis defence, are facilitated seamlessly within the Moodle educational framework. The learning management system serves over 28,000 users with approximately 1,500 courses across 135 packs. The server holds a total file size of 1.6 terabytes data from uploaded content alone and serves a library of over 4,600 tests. Continuous development of the e-learning system is driven by evolving learning needs. Annually, MNUMS conducts a satisfaction survey among students using the Moodle learning system. Based on survey results, it continuously updates and enhances application functions. Satisfaction levels were reported at 38.9% very good, 65.7% good enough, and 12.8% moderate.

Lecture halls (Nr. 305, 405) are equipped with computers (i3), microphones, projectors, air conditioners, white boards, vga switch and air conditioner. The walls have sound-absorbing panels. Computers are provided with basic working software such as Microsoft office word, excel, power point, adobe reader. All classrooms, rooms, and corridors of the School and Dental clinic buildings are provided with Wi-Fi (80/90 mbps).

6.1.5 Finances

The operating budget of the School of Dentistry is generated from tuition fees of students, various professional development programmes and workshops, and income of Dental clinic services. The substantial expenditure is on staff salary and their social insurance. Others are for maintenance, programmes and research, communication, professional development of staff, purchase of equipment and technical facilities, books and other learning and teaching materials etc.

The Graduate School's income from 2019 to 2023 ranged between 381 million and 525 million MNT. Revenue sources experienced a 24% increase in 2019-2020, followed by a 17% decrease in 2020-2021. Subsequently, there was a 14.3% increase in 2021-2022 and a further 16.5% increase in 2022-2023. These fluctuations directly correlate with both primary and supplementary funding streams. The total expenses of the Graduate School can be divided into three main groups: goods and services expenses, investment expenses, and current transfers. Of these, goods and services expenses and investment expenses comprise 89-95% of the total expenses.

6.1.6 Student support

The University and the School administrative units, departments, the student union, councils and clubs collaborate in providing a quality counselling services to students in their fields of

study, study skills development, future career paths and employment, as well as psychological, health and legal consultancy, as needed.

The Department of Student Development and Management (DSDM) plays a central role in providing support to students. It is responsible for executing and monitoring activities related to the smooth progression of students in their educational programmes. This includes receiving and resolving requests and complaints related to learning, organizing preventive medical check-ups, and facilitating students' participation in training programmes and international events.

Professional departments provide counselling by assigning one tutor to one to three groups of students who work with them daily throughout their study programme. In the Online Master each student has an individual supervisor for their learning process and proposal writing. In addition, all seven departments of the school clubs that support student interest in each professional field. Every year, activities of clubs are presented to all students and new members are recruited. Currently, seven student clubs in six professional fields are regularly operating and contributing to the development of students. In collaboration with DUEPM, DSDM and the Students Union the staff of the departments assist students in their professional development by providing more opportunities to engage in deeper learning in the professional field, research, and other field related projects. Specific focus is the students annual research conference that contributes to raising their interests in research as well as to developing their experiences in research methodology.

The MNUMS Student Union and the Student Council play an active role in providing support to students. Each undergraduate programme has a Student Council. They organize various activities, including lectures, trainings, career promotion events, research conferences, sports competitions, charity campaigns, and community services, to contribute to students' personal and professional development. As graduate programme, Medicine has an alumni association.

Students can participate in various clubs and associations related to their fields of study. These clubs offer activities that support individual learning, self-study, personality development, social and communication skills, and professional networking.

The university provides financial support to students through scholarships, grants, and tuition fee grants. The Department of Finances and Economics is involved in managing the financial aspects of student support, including the allocation of scholarships and grants. Supporting students with special needs involves addressing their rights, health, welfare, safety, and enhancing the overall learning environment. Resolution No. 346 of the Government of Mongolia

in 2022 enables the provision of tuition grants and scholarships through the Education Loan Fund to Mongolian citizens enrolled in diploma, bachelor's, master's, and doctoral programmes at Mongolian higher education institutions. MNUMS conducts annual evaluations to assess and enhance environments that cater to the diverse needs of students with special requirements. Initiatives like "Addressing Social Challenges of Students with Diverse Needs and Promoting Inclusive Education" facilitate organized discussions, dissemination of recommendations to constituent and branch schools, and ongoing monitoring of implementation. Measures include establishing support clubs, facilitating preferential housing and classroom arrangements, optimizing and decorating classrooms for students with specific needs, installing emergency aid boxes in schools, and ensuring accessible class schedules by locating them on the ground floor. Standards for students with special needs are prominently displayed on school bulletin boards and in waiting areas. Visually impaired students receive school news and information in Braille. Additionally, ramps have been installed inside and outside school buildings, branches, constituent schools, and hospitals, ensuring accessibility for disabled students and citizens alike.

6.2 Assessment

The Dental Faculty was established in 1961 and was located at the Faculty of Medicine at the Mongolian University. There was a resolution of the National Council of Health and the Ministry of Health that set the ground stone for the Dental Faculty. Later, in 1995 the Department of Oral Medicine moved into the Oral Medicine Research Center, which includes the departments: Operative Dentistry, Maxillofacial Surgery, Prosthodontics and Orthodontics. Since 2011 up to today the Dental Faculty is located in the North Campus of the National University of Medical Sciences. All dental disciplines as restorative dentistry, periodontology, preventive dentistry, prosthodontics, orthodontics, oral and maxillofacial surgery and dental technology and hygiene are located at this place. Only the ward for inpatients and the maxillofacial surgery procedures operated by general anaesthesia are located at the main campus. The School of Dentistry offers a six-year programme leading to the Doctor of Dental Surgery (DDS) degree. Further, the school offers educational programmes for oral technicians and oral hygienists. To ensure the academic requirements for existing and planned programmes an academic subcommittee exists at the school of dentistry with one chairperson and fourteen members. They are collaborating with the main academic subcommittee of the university. The location of the dental school is in a suburban area with limited space for expansion. The opportunities to establish childcare in the existing building are very limited due to lack of space. The dental faculty will move in the next years to another campus where more space is available, and

childcare will then be established as a part of overall efforts to establish more family friendly facilities for employees and students.

After a major upgrade, the IT facilities of the university should now guarantee that stable online e-teaching and e-learning and e-library access is possible, especially for online programmes.

The library of the dental faculty fulfils the need of a space for self-education and preparation of lectures both online with the located computers, WLAN access and also by the availability of important expert literature in a very comfortable and calm way. A good study atmosphere is available. There is also room for recreation breaks for students and employees during the lectures and courses, e.g. a coffee parlour and a table tennis, which is very positive to regenerate during the courses in the breaks. There is a high variety of student clubs, which can be attended by the students, and which are good link between leisure time activities and professional programmes.

The space for the practical dental courses is very comfortable since it is very spacious and sufficient, on the ground floor for the phantom course as well as in the patient treatment rooms. The equipment is of high standard and fulfils the needs of a high standard dental education which is up to date. The supervisors are qualified, and the practical courses have a very good ratio between students and teachers. Lectures are held online and also in presence, which offers flexibility to the students and also employees. This is a very positive fact, which gives flexibility to dental students. Bedside teaching would be relevant and should be established regularly, since the main aspects of oral and maxillofacial surgery could only be taught and be understood in appearance next to the patient at the ward. The teachers have the chance to get further qualifications, postgraduate programmes are offered, and international exchanges are planned. Students have the chance to evaluate the teachers and the courses.

The learning resources of the Pharmacy programme are evaluated positively. The building offers adequate space for theoretical and practical training. Specialized areas such as pharmacy rooms and practice classrooms support hands-on learning. The laboratories provide relevant training opportunities.

The School of Pharmacy has a sub-library with a collection of professional books and scientific journals. Students also have access to digital resources and databases through their student IDs. Additionally, students can utilize the central library of MNUMS for further academic support and resources. IT infrastructure, including computer networks and internet access, enables students to engage with current pharmaceutical research and online learning.

The Pharmaceutical Chemistry and Medicinal Herbology Laboratories are equipped for testing drug quality, plant-based medicines, and bioavailability. These labs are essential for students' practical training. The Drug Development Laboratory aligns with industry needs.

The combination of hands-on training, industry integration (through Erdem Pharm), and research facilities ensures that students develop both theoretical and practical competencies, preparing them for careers in pharmaceutical practice and research.

The infrastructure, laboratories, and IT resources at the School of Pharmacy are sufficient to meet the qualification goals. The facilities support the development of professional competencies, including patient care, drug development, and pharmaceutical management. Still, investing in the latest equipment and technology for both teaching and research is necessary to keep the curriculum and learning resources up to date and in line with current industry standards and trends.

The supervisory/administrative staff at the School of Pharmacy are knowledgeable about international relations and student exchange programmes, actively supporting foreign cooperation. Additionally, they implement student employment and paid internship programmes. SoP has a Student Support Specialist and collaborates with the MNUMS International Relations Office and the Department of Student Development and Management to support student mobility.

The School of Pharmacy has established student exchange programmes with three universities in China, focusing on herbal medicine internships and summer training programmes. It also partners with the Faculty of Medical Sciences at the University of Groningen for postgraduate training. Looking ahead, international cooperation and the number of student exchange programmes should increase further.

The learning materials are selected to align with students' interests, needs, knowledge, learning styles, and cultural backgrounds. These materials include scientific books, textbooks, online databases, various multimedia resources, and interactive tools. This approach enhances the learning experience, making it more engaging and helping students better focus on their studies.

The internal quality assurance regarding the suitability and accessibility of the entire equipment for students is assessed positively. In the final year of their studies, pharmacy students are assigned to internships at pharmaceutical supply organizations, pharmacies, and pharmaceutical analysis laboratories. During these internships, students can work with and test various equipment, ensuring they are familiar with the tools and technologies used in real-world pharmaceutical practice. This hands-on experience plays a crucial role in their training, allowing

them to gain practical knowledge and skills necessary for their future careers in the pharmaceutical field.

MNUMS regularly organizes a variety of training programmes to develop the skills and qualifications of supporting and administrative staff. These programmes are held consistently and aim to enhance professional competencies.

6.3 Conclusion

The criterion is **fulfilled**.

7 ESG Standard 1.7: Information management

Institutions should ensure that they collect, analyse and use relevant information for the effective management of their programmes and other activities.

7.1 Implementation

The University information management system that covers a student's university life cycle (registration, admission, progress, examinations, progression and graduation) allows relevant parties to use data for monitoring and evaluation of the programmes. Since 2016 the University has been using an e-registration system. The student's admission and their programme selection procedures strictly follow national and MNUMS regulations and procedures (<http://burtgel.mnums.edu.mn>).

Part of the information management system is designed to provide a timely support to students. There is a system (<https://sw-beta.xcloud.mn>) where students select their courses, get a transcript of their grades, verification and reference letters, track schedules of courses, complete satisfaction surveys, receive information about the University and the School activities, advertisements, announcements, and contact officers and specialists of DUEPM and lecturers.

MNUMS has established procedures for collecting and analyzing information on study programmes and other activities to ensure effective monitoring and evaluation. The university collects data on study programmes and other activities through various channels, including student records, academic performance, programme enrollment, course selection, examination results, and student feedback. This data is systematically gathered from the university's information management system (UNIMIS) and other relevant sources.

MNUMS has dedicated units responsible for monitoring and evaluating study programmes and activities. These units include the Department of Monitoring, Evaluation, and Internal Auditing (DMEIA) and the Department of Undergraduate Education Policy and Management (DUEPM). These units oversee the collection of data and ensure that it is systematically recorded and maintained.

The University's UNIMIS system provides the School and the Departments with access to all required data on the student population. The Department of Undergraduate Education Policy and Management and Department of Student Development and Management are responsible for managing and analyzing MNUMS undergraduate programme information. The Department of Monitoring, Evaluation and Internal Auditing is responsible for monitoring in accordance with

the relevant regulations (Provision 2.1, Appendix 6). The system collects student background data (name, surname, age, gender, birth date, birth place, certificate number of general secondary education, GEE grade, family members and their contacts, home address), student's registration (programme enrolled, student's code, course selection), and student progression (semester grades and GPAs, internship grades, final examination grades and GPAs, Graduation examination grades and GPAs, leaves and drop-out, and re-taking examinations), as well as graduate's employment.

Based on the collected data and analysis, the university implements continuous improvement measures. This may involve revising curricula, updating teaching methodologies, enhancing student support services, and addressing any identified issues.

Overall, MNUMS has established a systematic approach to collecting and analyzing information on study programmes and activities. This process enables the university to monitor the quality of education, identify areas for improvement, and ensure that study programmes align with the university's educational goals and standards.

Online Master's Programme in Medicine

The e-learning system currently in use contains all the necessary information to implement the curriculum and is fully exportable. For example, information about students, their progress, academic success, dropout rates, student satisfaction with the programme, learning resources, student support, and the employment status of graduates can be accessed by users with admin and coordinator rights at icec.mnums.edu.mn. This data is available for export and can be used for decision-making. During the implementation of the Online Master's Programme in Medicine, activity has been measured using three key performance indicators: academic success, quality, and service quality.

Since 2022, the ICEC has opened an additional page for comments and requests, replacing the previous method of receiving feedback and complaints from online students via email and phone. Over the last three years, students in the Online Master's Programme in Medicine have submitted a total of 525 requests and complaints, all of which have been resolved. Of these, 464 (88.4%) were requests regarding missed deadlines for course examinations, and 61 (11.6%) were complaints related to educational activities, lessons, videos, and content.

7.2 Assessment

Throughout the site visit it became apparent that MNUMS has an organized strategy to collect and assess data gathered on its study programmes. It includes student surveys, peer evaluations, and external input. The university collects comprehensive and relevant data. The data is updated regularly. Student and faculty engagement in data supply and evaluation seems to be strong, with various platforms for input. Students are well-represented, and faculty contribute to ongoing evaluations.

7.3 Conclusion

The criterion is **fulfilled**.

8 ESG Standard 1.8: Public information

Institutions should publish information about their activities, including programmes, which is clear, accurate, objective, up-to date and readily accessible.

Standard 4, criteria 4.5

The transparency and openness of a program

The transparency and openness of a programme are crucial to its success. It is the responsibility of the programme implementation unit to disseminate accurate, detailed, and up-to-date information about its activities to the public.

8.1 Implementation

MNUMS utilizes various public information channels to disseminate information about its activities and programmes. This may include official university websites, social media platforms, newsletters, and public announcements. The MNUMS official website is located at <https://www.facebook.com/mnums.edu.mn>. The BACHELOR OF DENTISTRY has been advertised through the SoD website: http://www.mnums.edu.mn/?page_id=44885. This contains information on teaching and working staff, SoD, Students, programmes (bachelor and diploma programmes, master's and doctoral programmes, postgraduate programmes). As of 2022 this website has been visited 324,000 times and 40,000 people started following.

The different schools and departments can be found at <https://www.facebook.com/sd.mnums>. Through this page the School reaches out to the public about DP: admission, graduation activities, professional activities, professional development training, research, clinical activities, dental preventive examinations, and treatment activities of the departments.

The university also maintains social network profiles where it publishes comprehensive information about its activities, academic programmes, research initiatives, and other relevant updates. These platforms serve as primary sources of information for students, faculty, staff, and the public.

MNUMS produces annual reports, academic publications, and informational materials that provide detailed insights into the university's activities, achievements, and future plans. These publications are made available to the public and stakeholders.

The university ensures that information about its programmes is easily accessible to the public. This may involve providing clear navigation on its websites, organizing information in a user-friendly manner, and offering multilingual support when necessary.

MNUMS adheres to national and international regulations and standards for the publication of information, ensuring that its activities and programmes are presented in accordance with legal and ethical guidelines.

Students' council and student clubs also have dedicated websites where they share information on programmes, learning materials, extra-curricular lectures, and activities.

8.2 Assessment

Since information is now primarily obtained from the websites of separate schools, the university should take care that all its websites are updated and that there are no dead links or outdated information on any of its websites. The design of the website should be checked for clarity and user-friendliness.

After the conference, the university informed that the information regarding programme admissions and the activities of the MNUMS Research Ethics Control Committee, previously published on the Division for Graduate Education Policy and Management's website (gp.mnums.edu.mn), had not been updated in line with the higher education reforms implemented in Mongolia during 2023-2024. To provide students with accurate and timely information from a single source, the "Admissions" section was moved to the Graduate School's website. Updates were made by newly approved regulations and procedures, and all information was revised accordingly.

Under the decision of the Academic Council of Graduate Education meeting, a working group was established to update the Graduate School's website, and the tasks and appointees were approved.

This joint working group updated the information on the Graduate School's website, added the necessary new information, and made organizational changes to improve transparency and user-friendliness for users.

Regarding the oversight of research ethics at MNUMS, the "Research Ethics Committee" section was transferred to the main website of MNUMS, ensuring centralized access to information related to ethical oversight of research activities across the university. The updates were coordinated by the Division for Graduate Education Policy and Management.

With regards to the internet presence of the Dentistry department it would be helpful if the website had separate entry paths for *patients*, *students*, *research*, and *staff/alumni*. These are the subgroups, which will visit the homepage. Every subgroup has special needs, and the clarity will be beneficial for the dentistry department. For *patients*, the possible issues/illnesses of consultation, phone numbers and times for consultations would be helpful. Every sub-department of the dentistry (e.g. periodontics) department should offer a special button for patients.

For *students*, the different programmes and schedules should be presented according to the grade of study, to improve transparency and ease of navigation. Moreover, every subject should introduce itself with a short overview for the students and with a short summary to get the main learn goals. If a student seeks further information about admission, the process and costs should be stated clearly.

Ongoing research projects should be presented in the *research* section in more detail, and an updated overview of published work (scientific papers (e.g. link to pubmed) should be presented. Outlooks for collaborations, projects and grants should be viewable.

For *staff/alumni* the section could offer information to attract new staff (outlook, benefits, possibilities) and an area with special log in with non-public exchanges for staff members.

8.3 Conclusion

The criterion is **fulfilled**.

Recommendations:

- The navigation on the main MNUMS website and its' connections to the websites of the separate schools should be improved in terms of transparency and user friendliness. All outdated information and dead links should be removed.

9 ESG Standard 1.9: On-going monitoring and periodic review of programmes

Institutions should monitor and periodically review their programmes to ensure that they achieve the objectives set for them and respond to the needs of students and society. These reviews should lead to continuous improvement of the programme. Any action planned or taken as a result should be communicated to all those concerned.

Standard 7

Internal programme quality assurance and improvement

The programme has implemented a periodic internal and external quality assurance mechanism, aimed at ensuring continuous development with the participation of stakeholders. This quality assurance process involves an objective evaluation of the programme's effectiveness, as well as the identification of areas in need of improvement.

9.1 Implementation

The university requires schools and departments to submit annual reports on their activities, including study programmes. These reports detail the progress, outcomes, challenges, and recommendations for improvement. The reports are used to assess the effectiveness of the programmes and identify areas for enhancement.

Students and employees actively participate in the supply and evaluation of data, as well as in the planning of follow-up activities at MNUMS. Students are regularly invited to provide feedback through surveys and assessments. This feedback covers various aspects of their academic experience, including course content, teaching quality, learning resources, and support services. They can also raise complaints and suggestions, which are then addressed by the university's administration and teaching staff.

Employees, including teaching staff and administrative personnel, are evaluated based on their performance, contributions, and adherence to university standards. This evaluation process may involve input from students, colleagues, and supervisors.

Both students and employees may be involved in the planning of follow-up activities, such as curriculum enhancements, resource allocation, and programme improvements. Their input is considered in the development of action plans and strategies for addressing identified areas for improvement.

External stakeholders play a significant role in the monitoring and review of programmes at MNUMS. The university actively involves external stakeholders to ensure that its programmes meet the needs of the community, align with industry standards, and adhere to regulatory requirements.

The university collaborates with industry and professional associations related to healthcare, medical practice, and academic disciplines. These associations provide valuable input on the relevance of programmes to current industry needs, emerging trends, and best practices. They may also offer guidance on curriculum development, practical training, and professional competencies.

MNUMS also seeks feedback from employers, practitioners, and alumni who have firsthand experience in the field. Their input helps the university assess the effectiveness of its programmes in preparing graduates for professional roles and identifies areas for improvement based on industry demands.

External stakeholders from the local community, including patients, community leaders, and public health organizations, may be involved in providing feedback on the societal impact of the university's programmes. Their perspectives help ensure that programmes address community health needs and contribute to public welfare.

Bachelor of Dentistry

Over the years the Dentistry programme has gone through 11 revisions. Relevant MNUMS units such as DUEPM, DSDM and the Department of Faculty Development and e-Learning are responsible for on-going monitoring of admission, progression of students, human and learning resources, and environment regarding each programme. The design, implementation, improvement of programmes and syllabi, and development of recommendations to the schools and departments are responsibilities of the MNUMS Programme Committee.

In accordance with the university regulations, the DUEPM takes responsibility to evaluate academic programmes every 5 years. So, the new 6-year Bachelor of Dentistry was evaluated in 2021 by a team of 12 representatives of relevant units assigned by the President's order A/199 in September of the same year. The evaluation team issued the following recommendations:

1. Seek for solutions to decrease the number of students in one group for practical courses and labs

2. Increase provision of laboratory tools and equipment
3. Revise content of courses to avoid overlaps of topics and sub-topics.

(Evaluation report, December 15, 2021)

The school and departments addressed the issues by increasing credits (hours) for practical courses and independent studies of students. Now the practical courses are increased by 50% (compared to the previous program), and the student's independent studies reached 4399 hours (compared to only 544 hours). As a part of renewal, courses in clinical communication of a dentist, relationship of an oral and maxillofacial surgery, maxillofacial cancer, oral health and care of the population and the disabled, paediatric behavioural management, ophthalmology, and internal medicine have become constituents of the programme. At the same time, a few general foundation courses such as biochemistry, medical chemistry, microbiology science, histology, and biology and basic English of the dentist training programme were reduced which made total credits of the programme as 195 (order A186, August 26, 2022). The ratio of lecturer to students is substantially decreased and reached 1:12.8.

The issues that are revealed by the students' satisfaction survey are being addressed in the School's annual planning of budget and resources.

Bachelor of Pharmacy

Since 1961, the MNUMS School of Pharmacy has provided the training programme, and in the past, the Bachelor of Pharmacy has undergone a total of 12 reforms. Since 2008, a training programme has been implemented to train qualified professionals to provide "patient-centred care" per changes to worldwide trends and concepts of pharmaceutical care. Of the programme changes, the biggest change was the introduction of a pharmacologist training programme in training, which provides clinical care-oriented Pharmaceutical Care.

The Bachelor's in Pharmacy has been revised 10 times.

Online Master's Programme in Medicine

The Online Master's Programme in Medicine began admitting students in 2016 and initially implemented a 40-credit curriculum. Following a satisfaction survey of programme stakeholders in 2019 and to comply with regulations from the central government administration, the programme was adjusted to 37 credits after discussions at the graduate education committee revision. Additionally, in 2021, the research methodology courses were further enhanced to

align with master's programmes at recognized universities. The results of the external evaluation (2) and the evaluation of programme coherence and redundancies over content (3) related to higher education reform were reviewed twice by the Division for Monitoring, Evaluations and Inspection of MNUMS.

The implementation of the programme is evaluated based on the satisfaction of stakeholders, including students and faculties, with learning outcomes, course content, teaching methods, assessment, and the environment. Since 2018, the International Cyber Education Centre has been continuously conducting satisfaction and exit surveys among students and graduates. The learning outcomes of the course are regularly presented at the beginning of the course, and faculty members assess whether the learning outcomes have been achieved.

Efforts to enhance the feedback loop between faculties and students and refine programme content and methodology are based on satisfaction and learning outcome evaluations involving students and graduates. The newly approved faculty performance evaluation procedure in 2023 awards additional points to faculties who introduce innovative teaching methods, update content, and establish effective feedback mechanisms.

9.2 Assessment

The university underscores the importance of implementing structured processes to ensure the quality and relevance of their study programmes over time. These processes serve as a means to safeguard academic standards, align programmes with the institution's strategic goals, and respond to the changing needs of society, the labour market, and other stakeholders.

During the discussion with employers, representatives stated to have exchanges with the university regarding curriculum development. The university sends a form once a year to gather feedback from employers and there is a planned exchange with teachers. The frequency of these meetings could be increased to further intensify the collaboration with labour market representatives.

The university made clear that the on-going monitoring focuses on the systematic collection and evaluation of data to assess the performance of programmes on a continuous basis. This includes analysing key indicators such as student progression, completion rates, employability outcomes, and feedback from students, staff, and external stakeholders. The faculties of the HEI are expected to use this information to identify areas of improvement and address challenges promptly to maintain the quality and effectiveness of their programmes.

Periodic reviews complement on-going monitoring by providing an opportunity for a more comprehensive evaluation of programmes at regular intervals. These reviews assess the overall coherence, content, and outcomes of programmes to ensure they remain relevant in a changing educational and societal context. They also allow the faculties to reflect on whether programmes continue to meet their intended learning outcomes in the context of Council meetings, comply with external quality standards, and align with the expectations of employers, professional bodies, and other stakeholders.

This also emphasizes the importance of involving a broad range of stakeholders in the monitoring and review processes. This includes academic staff, students, alumni, employers, and external experts, whose input provides valuable perspectives on programme relevance and quality. Furthermore, institutions are expected to document these processes transparently, ensuring that the outcomes of monitoring and review activities are communicated effectively and lead to concrete actions for improvement.

The monitoring of programmes is a well-established process providing interactions and feedback of students regarding the programme. The student expectations, needs and satisfaction in relation to the programme should be measured by regular evaluations for students and staff, four times a year. Further interactive discussions should be established to get the needs of the students and to implement them early in the lectures. This could be established after every lecture.

Overall, the university shows compliance with by demonstrating an institution's commitment to maintaining high standards of quality in its educational offerings and its ability to adapt to the evolving needs of society and the labour market. A structured approach to on-going monitoring and periodic review ensures that programmes remain dynamic, student-centred, and aligned with both institutional objectives and external expectations.

9.3 Conclusion

The criterion is **fulfilled**.

10 ESG Standard 1.10: Cyclical external quality assurance

Institutions should undergo external quality assurance in line with the ESG on a cyclical basis

10.1 Implementation

MNUMS engages with external quality assurance agencies, such as the Ministry of Education, the Ministry of Health, the Mongolian National Council for Education Accreditation, and other relevant governmental bodies. These agencies provide oversight, evaluation, and accreditation of the university's programmes, ensuring compliance with national standards and regulations.

There is a well-set nationwide system of external quality assurance of educational institutions where several organizations are actively involved. The compatibility and implementation of policies and activities of the University with the government policies, as well as its performance quality have been regularly reviewed by MOEAS, MNCEA, Mongolian National Audit (MNA), the National Inspectorate (NI), the Financial Regulatory Commission (FRC), the State Property Committee (SPC), Authority for Fair Competition and Consumer Protection (AFCCP), the General Authority for Archives (GAA), and the Mongolian Tax Administration (MTA). As concerning academic programmes, the MOEAS, MoH, MNCEA, the National Health Development Centre (NHDC), MNA, and NI are the key reviewers.

The requirements and recommendations given by the experts of the external evaluation agencies are openly discussed in professional departments, students, and academic programme units followed by decisions and actions taken by the Academic Council of the MNUMS.

Institutionally, MNUMS has been accredited three times at the national level in the following years: in 1999 for 5 years (1999-2004), in 2004 for 10 years (2004-2014), and in 2018 for 5 years (2018-2023). The accreditation of the higher education institutions was postponed during the period of 2014-2018 due to the reform process of MNCEA.

The Dentistry programme (D091101) has been successfully accredited three times at the national level by the Mongolian National Council of Educational Accreditation (MNCEA). In 2006: 5-year bachelor's degree programme "Doctor, Oral and Maxillofacial Education" was accredited for the first time in the country for five years (2006-2012). In 2012: the same programme was accredited for another 5 years, which is up to 2019. In 2019: the new 6-year bachelor degree Dentistry programme was accredited for the first time (2019-2024) These accreditation

processes and their conclusions were invaluable for the School due to their detailed recommendations for continuous improvement of the programme in regard to its structure, management, content, methodology, resources and staff.

The bachelor's in Pharmacy has been accredited by the Mongolian National Council of Education Accreditation (MNCEA) in 2011, 2018, and 2023, respectively. Accreditation is for five years.

The Health Development Center (HDC) organizes the licensing of professional activities and monitors the quality of training. For example, licensure test success rates for pharmacy graduates have averaged over 90% in the past five years.

The Online Master's Programme in Medicine has not received any external accreditation on the national level.

10.2 Assessment

MNUMS has established a strong cyclical external quality assurance system, which is aligned with the individual requirements of external stakeholders. The institution has established an internal quality assurance system responsible for preparing comprehensive self-reports and supporting documents essential for both national and international accreditation procedures. This system ensures that MNUMS meets the rigorous standards expected by reputable accreditation agencies.

MNUMS systematically collects and analyzes feedback from various stakeholders, including fresh graduates, employers, and alumni, on an annual basis. The insights gained from these surveys are critical for the continuous enhancement of the university's programmes.

MNUMS adheres to regular cyclical accreditation procedures on the institutional level and on the level of programmes. The intervals of accreditation on both levels will give the university sufficient time to implement improvements based on feedback received from previous accreditation cycles and external stakeholders. This cyclical approach not only ensures compliance with external quality standards but also enables a culture of continuous improvement within the institution.

Since MNCEA does not yet accredit online programmes, the Online Master's Programme in Medicine has not received any other external accreditation besides this current evaluation. It is highly advisable that this and other online programmes are included in the national external quality assurance cycles.

Overall, MNUMS's cyclical external quality assurance processes are comprehensive and well-structured. The institution's proactive approach to accreditation, stakeholder feedback, and benchmarking against international standards highlights its dedication to maintaining quality in their academic programmes and developing continuous institutional improvement.

10.3 Conclusion

The criterion is **fulfilled**.

IV Recommendation to the Accreditation Commission of ACQUIN

1 Assessment of compliance the Standards and Guidelines in the Higher European Area (ESG) in the actual official version

The study programmes "Dentistry" (B.Sc.), "Pharmacy" (B.Sc.), "Online Master's Programme in Medicine" (M.Sc.) were assessed on the basis of the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG), and the national or other relevant regulations.

The expert group concludes that the **ESG standards** 1.1 (Policy for quality assurance), 1.2 (Design and approval of programmes), 1.3 (Student-centred learning, teaching and assessment), 1.4 (Student admission, progression, recognition and certification), 1.5 (Teaching staff), 1.6 (Learning resources and student support), 1.7 (Information management), 1.8 (Public information), 1.9 (On-going monitoring and periodic review of programmes) and 1.10 (Cyclical external quality assurance) **are fulfilled**.

2 Accreditation Recommendation

The peer-review experts recommend **accreditation without conditions**.

General recommendations

1. The university should develop more participatory and solution-oriented education approaches and integrate additional clinical case studies and problem-solving exercises into the curricula.
2. Quality assurance cycles on teaching quality should consistently result in the provision of feedback regarding the potentially applied modifications to boost overall teaching quality.
3. The workload of teachers should be evaluated in shorter cycles to regularly review the proportion between teaching and research. In this context, it should be reviewed whether teachers have sufficient time for publications in addition to their teaching activities.
4. The navigation on the main MNUMS website and its' connections to the websites of the separate schools should be improved in terms of transparency and user friendliness. All outdated information and dead links should be removed.

Programme-specific recommendations for study programme “Pharmacy” (Bachelor of Science)

1. The school should further develop international collaboration for student and staff mobility.
2. The proportion of pharmacy-specific courses should be increased.

V Decisions of the Accreditation Commission of ACQUIN

Based on the evaluation report of the expert group and the statement of the Higher Education Institution, the Accreditation Commission of ACQUIN has made its decision on the 10 March 2025:

General recommendations for all study programmes:

- The university should develop more participatory and solution-oriented education approaches and integrate additional clinical case studies and problem-solving exercises into the curricula.
- Quality assurance cycles on teaching quality should consistently result in the provision of feedback regarding the potentially applied modifications to boost overall teaching quality.
- The workload of teachers should be evaluated in shorter cycles to regularly review the proportion between teaching and research. In this context, it should be reviewed whether teachers have sufficient time for publications in addition to their teaching activities.
- The navigation on the main MNUMS website and its' connections to the websites of the separate schools should be improved in terms of transparency and user friendliness. All outdated information and dead links should be removed.

Pharmacy (B.Sc.)

The study programme “Pharmacy ” (Bachelor of Science) is accredited without any conditions.

The accreditation is valid until 30. September 2031.

The following recommendations are given for the further development of the study programme:

- The school should further develop international collaboration for student and staff mobility.
- The proportion of pharmacy-specific courses should be increased.

Dentistry (B.Sc.)

The study programme “Dentistry ” (Bachelor of Science) is accredited without any conditions.

The accreditation is valid until 30. September 2031.

Online Master’s Programme in Medicine (M.Sc.)

The study programme “Online Master’s Programme in Medicine ” (Master of Science) is accredited without any conditions.

The accreditation is valid until 30. September 2031.