Annex No. 1

NATIONAL CENTER FOR EDUCATIONAL QUALITY ENHANCEMENT

Accreditation Expert Group Report on Higher Education Programme

YEREVAN STATE MEDICAL UNIVERSITY AFTER MKHITAR HERATSI FOUNDATION

GENERAL MEDICINE
One-cycle MD educational programme(Russian)

YEREVAN STATE MEDICAL UNIVERSITY AFTER MKHITAR HERATSI FOUNDATION

Evaluation date(s): 17 – 19 October 2023

Report submission day: 9th January 2024

Yerevan

Information about a Higher Education Institution[1]

Name of Institution Indicating its Organizational Legal Form	Yerevan State Medical University After Mkhitar HeratsiFoundation
Identification Code of Institution	10047830
Type of the Institution	University

Expert Panel Members

Chair (Name, Surname, HEI/Organisation, Country)	Andy Gibbs, Independent QA Consultant, United Kingdom
Member (Name, Surname, HEI/Organisation, Country)	Mihaly Boros, University of Szeged, Hungary
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Member (Name, Surname, HEI/Organisation, Country)	Heghine Martikyan, Armenian Medical Institute, Armenia

[1]In the case of joint education programme:Please indicate the HEIs that carry out the programme. The indication of an identification code and type of institution is not obligatory if a HEI is recognised in accordance with the legislation of a foreign country.

I. Information on the education programme

Name of Higher Education Programme (in Georgian)	ზოგადი მედიცინა
Name of Higher Education Programme (in English)	General Medicine
Level of Higher Education	7th level
Qualification to be Awarded[2]	MD Physician
Name and Code of the Detailed Field	ref. code: 91201.00.7 (Armenian classification) 0912 – Medicine (NQF)
Indication of the right to provide the teaching of subject/subjects/group of subjects of the relevant cycle of the general education[3]	
Language of Instruction	Russian
Number of ECTS credits	360
Programme Status (Accredited/ Non-accredited/ Conditionally accredited/new/International accreditation) Indicating Relevant Decision (number, date)	Institutional accreditation (N36, 24.12.2020)
Additional requirements for the programme admission (in the case of an art-creative and/or sports educational programme, passing a creative tour/internal competition, or in the case of another programme, specific requirements for admission to the programme/implementation of the programme)	-

II. Accreditation Report Executive Summary

General Information on Education Pogramme[4]

The accreditation panel reviewed the Russian educational programme in General Medicineat the Yerevan State Medical University after M. Heratsi (YSMU). YSMU has developed a curriculum that is integrated, aligning with standards set by the World Federation for Medical Education (WFME) and the Sectoral Benchmarks for higher medical education. The programme's development considered global and regional best practices, resources, and labour market demands.

The university's MD program follows the traditional one-step approach and adheres to the 7th level standards of both the Armenian National Qualifications Framework and the European Qualifications Framework. The programme integrates foundational knowledge with clinical skills and research in biomedical sciences. This structure is intended to prepare students for further academic pursuits and contributions in medical services and research.

Features of the MD program include the integration of humanities, which covers subjects such as History of Medicine, Latin, Armenian Language, and Philosophy. The curriculum is integrated across foundational, preclinical, and clinical disciplines, using horizontal, vertical, and spiral principles. It also prepares students for the US Medical License Examination.

The program has a research component where students engage in various medical areas, with an emphasis on individual research projects and academic writing. There are longitudinal modules focused on clinical skills and ethical considerations. YSMU has a support system for students, comprising advisors, mentors, and coordinators. Additionally, there are provisions for extracurricular activities within Armenia and internationally.

YSMU's goal is to produce medical professionals who are knowledgeable and ready for specializations. The institution aims to foster qualities such as lifelong learning and an understanding of the role of research in healthcare in its graduates.

Overview of the Accreditation Site Visit

The Self Evaluation Report and associated documents were sent to the expert panel before site visit/in advance. The panel identified the particular Standards which best matched their expertise although all members reviewed all the documents and prepared areas of enquiry for the 3-day site visit which took place on 17th, 18th and 19th October 2023 at the University. During the visit the panel identified several documents which were needed to add further information and evidence, and these were requested prior to the conclusion of the visit.

During the site visit all panel members attended meetings with key personnel associated with the programme, including Rector and Vice Rectors, Heads of Department, Dean, Student Services managers, Quality Assurance Department representatives, Lecturers, students, alumni, employers and Student Parliament Presidents. Additionally, the panel visited,

observed practice in and were able to ask questions in two clinical areas, research facilities, library and student areas.

Brief Overview of Education Programme Compliance with the Standards

The program has established clear objectives and learning outcomes aligned with the university's mission and strategic plan. It is designed to integrate knowledge across various medical disciplines, emphasizing patient-centered care, effective communication, and public health improvement. While the objectives are well-articulated, the report suggests enhancing their public accessibility to improve transparency and stakeholder engagement.

The program utilizes diverse and modern teaching methods suitable for achieving its learning outcomes. It includes practical skills development through simulation and clinical practice, with the recent introduction of OSCE exams. The assessment system has evolved to include multiple components, although the report suggests that more detailed criteria and rubrics for scoring would be beneficial.

The university has established a student-centered environment, offering consultative and support services for academic and career development. There's a broad range of extracurricular activities and international exchange opportunities, although participation seems to be lower than optimal, potentially due to program mismatches and the pandemic.

The report confirms the program is well-supported with human, material, and financial resources, ensuring its stable and effective functioning. There is a commendable investment in infrastructure, such as the Simulation Centre and OSCE exam space, and efforts are made to keep educational materials up-to-date.

The program actively engages in internal and external quality evaluations to inform continuous improvement. It is responsive to feedback from stakeholders and utilizes data from these assessments for program development. There are suggestions for creating more structured forums for stakeholder feedback and integrating more technology-driven teaching methods.

Overall, the program substantially complies with the standards set for educational objectives, learning outcomes, teaching methodology, student achievements, and teaching resources. The program fully meets the requirements in many areas but still has room for further development, especially in teaching quality enhancement.

Recommendations

1. Make the programme objectives publicly accessible, possibly through the institution's website or other platforms, to bolster transparency and stakeholder engagement.
2. In clinical settings the assessment criteria of practical skills should better be controlled and described as the portion of the assessment of the skills (in clinical courses, in general) is low.

3. Monitoring linkage must be assured between separate phases of the program (for example, between the preclinical and clinical parts) to promote an uninterrupted teaching and learning process, and to ensure harmony between plans and reality.
4. The modular structure of the programme should be reviewed and modified, integration levels (horizontal, vertical and spiral components) should be developed based on a comprehensive, agreed educational strategy.
5. The structure of the modules (linking of subjects, connection between themes and topics, the prerequisites) should be reviewed.
6. The University should develop an Action Plan detailing the activities, responsibilities, timelines, and the nature of expected changes.
7. The curriculum map and the links between the horizontal, vertical, and spiral elements of the curriculum should be reviewed and developed.
8. A balanced distribution of mandatory and elective courses during each academic year/semester is recommended. It is also recommended to offer more than 20 elective courses as stated in YSMU MD Educational Program.
9. Review the programme by clearly defining and listing the skills/research competencies in the curriculum.
10. Implement more detailed criteria and rubrics for scoring.

Suggestions for Programme Development

1. Regular workshops or feedback sessions can ensure that all stakeholders, from faculty to students, are aligned with the programme objectives.
2. Given the dynamic nature of the medical field, it is recommended to periodically review and update the programme objectives to ensure their continued relevance.
3. Ensure that all the employers involved in programme development are fully familiar with programme learning outcomes.
4. Revisit the formative assessment schedule and consider whether another term would provide a more accurate description.
5. Review the Institution's established data protection policy to take care of data privacy issues.
6. Encourage collaboration between faculty from various preclinical departments and clinical disciplines to work together to develop a structure that incorporates elements of preclinical courses and subjects of clinical medicine.
7. The structure of the programme could be made more understandable and easier to follow with a diagram (organogram) showing the administrative, academic, and clinical units, departments, divisions, affiliated teaching hospitals. This could be presented on the website of the HEI.
8. In some cases, the English names of the courses are less clear - Private Surgery might be "General Surgery" and Topographical Anatomy and Operative Surgery = "Surgical Anatomy and Techniques."
9. Refine the definition of the module.
10. Review the distribution of academic hours.
11. A wider use of modern teaching methods is suggested; encourage active learning techniques, such as problem-solving, case-based learning, and group projects.

12. E-learning approaches can be used more extensively to improve the didactic concept.
13. Strengthen the curriculum-based research work of students further e.g., with elective courses for those who are participating in student scientific circles at the departments/clinics.
14. Implement a multicomponent assessment system for all subjects.
15. Continue pursuing ERASMUS+ programme and to form bilateral partnerships with different universities to increase the range of possibilities for students who want to participate in international programmes.
16. Establish annual norms for scientific and other activities in addition to the teaching workload.
17. Expand the resources of the Department of basic subjects and simulation center/OSCE exam.
18. Further improve stakeholder insight and invest in initiatives aimed at enhancing the understanding and engagement of all stakeholders, especially external collaborators like employers
19. Simplify, streamline and prioritize evaluative results by developing strategies for consolidating evaluative findings and prioritizing them based on their strategic impact potential.
20. Explore opportunities for leveraging technological advancements in optimizing the evaluation processes. This could include the use of advanced analytics tools to enhance the analysis of evaluative findings.
21. While the programme already involves multiple stakeholders in its evaluation process, there could be more structured forums or platforms where these stakeholders can provide feedback. Regular roundtable discussions or workshops could be organized to facilitate this.

Brief Overview of the Best Practices (if applicable)[5]

The University has adopted a sound approach to curriculum development and has engaged the staff successfully in the process of curriculum change.

Information on Sharing or Not Sharing the Argumentative Position of the HEI

The HEI mostly agreed with recommendations and suggestions, hence, no amendments.

In case of re-accreditation, it is important to provide a brief overview of the achievements and/or the progress (if applicable)

III. Compliance of the Programme with Accreditation Standards

1. Educational Programme Objectives, Learning Outcomes and their Compliance with the Programme

A programme has clearly established objectives and learning outcomes, which are logically connected to each other. Programme objectives are consistent with the mission, objectives and strategic plan of the HEI. Programme learning outcomes are assessed on a regular basis to improve the programme. The content and consistent structure of the programme ensure the achievement of the set goals and expected learning outcomes.

1.1 Programme Objectives

Programme objectives consider the specificity of the field of study, level and educational programme, and define the set of knowledge, skills and competences a programme aims to develop in graduate students. They also illustrate the contribution of the programme to the development of the field and society.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Upon a thorough review of the SAR, associated papers and additional documents complemented by interviews and meetings with relevant personnel, including managers, teachers, student and alumni, the panel has conducted an in-depth analysis of the continuing and integrated MD programme's objectives. The objectives are carefully crafted, reflecting the institution's commitment to producing well-rounded medical professionals.

The programme's primary aim is to ensure that graduates can seamlessly integrate knowledge from various disciplines, including biomedicine, behavioral, social, and clinical sciences. This holistic approach is designed to produce professionals who can provide high-quality patient care. The clarity and alignment of this objective with the mission of the University and the Faculty of General Medicine underscore its realistic and achievable nature.

Further, the programme gives emphasis to the importance of clear, competent, and effective diagnosis and management. This focus ensures that graduates are adept at identifying medical issues and implementing appropriate interventions, always prioritising patient-centered care. Effective communication is another cornerstone of the programme. Recognising the pivotal role communication plays in medicine, the programme aims to instill strong interpersonal and professional communicative skills in its graduates.

Beyond individual patient care, the programme also focuses on broader public health improvement. Graduates are educated to apply innovative strategies to address significant clinical problems, ensuring they can contribute to the betterment of society. This emphasis on public health and the application of innovative strategies reflects the programme's forward-thinking approach and its contribution to the development of the field and society.

The objectives resonate with the broader mission of the University and the Faculty of General Medicine. The overarching aim is to produce internationally recognized MD Physicians who are not only experts in their field but also contributors to the broader medical community. The alignment of the programme objectives with the institution's mission is evident and commendable.

Moreover, the objectives are not just theoretical constructs; they are deeply rooted in the practical demands of the medical field. The programme is tailored to meet both Armenian and international market demands, ensuring that graduates are well-prepared for various job markets. The alignment with international standards, such as the World Federation for Medical Education (WFME), further showcases the programme's commitment to global excellence.

However, while the SAR provides detailed objectives, it does not explicitly mention their public accessibility and although teachers and students confirmed the availability and awareness of the objectives the panel could not readily access these on the HEI website. Ensuring that these objectives are easily accessible to all stakeholders and the general public would enhance transparency and stakeholder engagement. Additionally, while the document suggests stakeholder involvement in the programme, it does not explicitly state if the objectives are shared by all involved. Employers confirmed that they are aware of the objectives but offered no critical comment on them and could further not identify a formal systematic mechanism for providing feedback or updating the objectives. They also confirmed satisfaction that the programme objectives met their needs as employers. Ensuring that all stakeholders, from faculty to students, are aligned with these objectives would further strengthen the programme's coherence and effectiveness.

In conclusion, the panel considered substantial evidence that the criteria for standard 1.1 "Programme Objectives" are met. However, areas such as public accessibility and shared understanding of objectives might benefit from further attention and clarification.

Evidence/Indicators:

Educational programme,

Mission, objectives and strategy of the HEI,

Analysis of the demands of labour market and employers,

Website,

Interview results.

Recommendations:

Make the objectives publicly accessible, possibly through the institution's website or other platforms, to bolster transparency and stakeholder engagement.

Suggestions for the Programme Development:

Regular workshops or feedback sessions can ensure that all stakeholders, from faculty to students, are aligned with these objectives.

Given the dynamic nature of the medical field, periodically review and update these objectives to ensure their continued relevance.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.1 Programme Objectives	☐	☒	☐	☐

1.2 Programme Learning Outcomes

➢The learning outcomes of the programme are logically related to the programme objectives and the specifics of the study field.

➢ Programme learning outcomes describe knowledge, skills, and/or the responsibility and autonomy that students gain upon completion of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The one-cycle educational MD (Russian) program is compiled in accordance with the framework of higher education qualifications, the field characteristics of medicine, and based on the National (Armenian) Qualifications Framework (NQF) evaluation criteria. The Georgian national sectoral benchmark statement, which is developed in accordance with WFME standards was considered within the evaluation criteria. The primary tool of external evaluation was the standards and guidelines at the Georgian National Centre Education Quality Enhancement. The program's learning outcomes are grouped into three main domains: Knowledge and Understanding, Skills, and Responsibility and Autonomy, and are overall presented within the 12 LOs.

Program learning outcomes:

- are consistent with the appropriate level of education according to the National and European Qualifications Framework (EQF) and with the qualification to be awarded;

- are consistent with the main objectives of the program and stem from the University Mission and the Strategic Plan for Development;
- clearly describe the minimum competencies required for graduation. They are achievable and realistic. Clinical sciences are oriented toward a patient-centered approach, and include effective communication, evidence-based diagnosis, and treatment;
- focus on the overarching knowledge, skills, and/or the sense of responsibility and autonomy defined by the program content;
- emphasize the importance of fundamental as well as clinical knowledge, alongside the practical/clinical/research skills (including methods of diagnosis, Evidence-Based Medicine), as well as applying ethical, legal, and professional responsibilities in medical practice;
- are aligned with each component's (module's) learning outcomes: at the end of each course description, the link between the particular course LOs and the general LOs is shown. Modules' LOs are shaped according to the program LOs. Subsequent teaching/learning/assessment methodology is defined in each syllabus to achieve the LOs of each module.

In the Self-Evaluation Report (SER), the institution mentioned that learning outcomes are established with the active participation of all program stakeholders (academic/invited staff, students, graduates, employers, etc.). However, during interviews with faculty members/employers, we found that at least in some areas such as professionalism, the faculty members/employers are not fully familiar with its concepts. Therefore, it could not be ensured that all stakeholders of the program are fully familiar with program learning outcomes.

Evidence/Indicators

Educational programme,

SER,

Interview results.

Recommendations:

None

Suggestions for Programme Development

Ensure that all the employers involved in programme development are fully familiar with programme learning outcomes.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.2 Programme Learning Outcomes	☒	☐	☐	☐

1.3 Evaluation Mechanism of the Programme Learning Outcomes

- Evaluation mechanisms of the programme learning outcomes are defined;the programme learning outcomes evaluation cycle consists of defining, collecting and analyzing data necessary to measure learning outcomes;
- Programme learning outcomes assessment results are utilized for the improvement of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

- Evaluation mechanisms of the program learning outcomes are defined. The process of assessment consists of defining, collecting and analyzing data necessary to measure learning outcomes.
- The institution has the Policy on Mechanisms of Assessment of the Program Learning Outcomes, which defines the objective of the concept towards organizing and running the assessment, stages of assessment, principles, standards, methods and procedures of determination thereof. The institution uses principles of validity, objectivity, practicality, cost-effectiveness and reliability to achieve the assessment system benchmark.
- PDCA cycle is used for ensuring the interdependence of outcomes, evaluating the dynamics of outcome achievement and improvement of the program. Quality Assurance department actively uses surveys for different stakeholders of the program to collect and analyze the data: Assessment of student academic performance, multiple factor analysis of final exam results, feedback through appeals and a “Teacher through students’ eyes” survey, employer and graduate (clinical residents) satisfaction levels with program outcomes through surveys; reviewing outcome-specific wishes and recommendations are the main tools for assessing the learning outcomes of the program.
- Program LOs consists of Knowledge, Skills,and Autonomy and responsibility. Each component is considered in every course of the program on the level of content, teaching-learning and assessment methods.
- The assessment politics for achieving the *knowledge* component in program is vast. It is checked in each course, and also the vast majority of the courses (including clinical courses) finish with written examination for checking the knowledge. As for the *skills* part of LOs – the portion of the assessment of the skills (in clinical courses, in general) is low. Teaching of clinical skills is considered by the courses (especially in clinical courses) with relevant methodology, but it does not subsequently translate into assessment - mostly the formative assessment of the skills is ensured during the course, but summative

assessment happens mostly at the end of the program when students take cumulative examination (attestation).

- Here it needs to be mentioned, that there is a new and modern OSCE center at the university, where students take the examination for attestation. Besides, there is a department of clinical skills with mannequins and most basic techniques, and also enough clinical bases for the teaching and assessment of clinical skills part, which can be successfully used for ensuring the achievements of skills and autonomy-responsibility part of LOs.
- It should be noted that the institution has undergone significant changes in terms of LO evaluation: based on the recommendations of external evaluation experts, the formation of the LO program has been changed, as well as the methods for achieving them have been refined in comparison with the previous program: the program envisages a multi-component assessment system, as well as a new methodology of teaching and assessment of clinical skills, which is reflected in the program

To summarize, evaluating the program LO's requires a holistic and systematic approach, which implies not only the cumulative sum of results achieved in each course, but also a stage-by-stage assessment that allows assessing the student's professional development and achievement of the defined goal at different stages of the program, as well as to plan the next stage: existing integration between basic medical sciences and clinical subjects seems to be guaranteed and this process should provide the enrolled students skills to assume appropriate clinical responsibility upon graduation and to continue their professional development. The professional content and structure of the training, the teaching and learning support methods meet the professional requirements and are suitable for achieving the intended LOs. However, it is important to note that certain monitoring linkage must be assured between different phases of the program (for example, between the preclinical and clinical parts) to promote an uninterrupted teaching and learning process, and to ensure harmony between plans and reality.

Evidence/Indicators

Policy on Mechanisms of Assessment of MD Degree Program Learning Outcomes,

Surveys analyzed by Quality Assurance Department,
MD program description,
Interview results.

Recommendations:

In clinical settings the assessment criteria of practical skills should better be controlled and described as the portion of the assessment of the skills (in clinical courses, in general) is low.

Monitoring linkage must be assured between separate phases of the program (for example, between the preclinical and clinical parts) to promote an uninterrupted teaching and learning process, and to ensure harmony between plans and reality.

Suggestions for the Programme Development

Revisit the formative assessment schedule and consider whether another term would provide a more accurate description.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.3 Evaluation Mechanism of the Programme Learning Outcomes	☐	☒	☐	☐

1.4. Structure and Content of Education Programme

- The Programme is designed according to HEI's methodology for planning, designing and developing of education programmes.
- The Programme structure is consistent and logical. The content and structure of the programme ensure the achievement of programme learning outcomes. The qualification to be granted is consistent with the content and learning outcomes of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Structural details for the Russian-language General Medicine (MD)programme can be found on the YSMU website. The composition of the undergraduate Armenian, English and Russian-language programmes is essentially the same, with identical elements and composition throughout the academic years. Among the few minor differences are additional Armenian language courses in the English and Russian programs, both, delivered in the preclinical phases.

The goal of the Russian-language programme is to provide high quality education with effective interpersonal and professional communication skills, and the lack of proper command of the Armenian language may cause communication difficulties with patients and relatives. For this purpose, the Russian program provides the basically necessary Armenian language courses but given that the field-specific competency is to carry out efficient consultation with a patient, more emphasis, additional training courses for medical communication and related fields (such as principles of ethics, history taking in family medicine) is needed, perhaps with the help of simulated patients or additional (elective) learning possibilities in later semesters.

Russian MD program of YSMU corresponds to the 7th level of Armenian National Qualifications Framework (Bachelor + Master) and the 7th level of European Qualifications Framework. The duration is 6 academic years with 12 semesters including 1 year of internship. The programmes are aligned to the European Credit Transfer and Accumulation System (ECTS) and consist of 360 ECTS credits. According to SER, 1 ECTS is equivalent to 30 study hours (which contain contact and independent hours). According to SER the full-time, module-specific/component credit load and the ratio of contact and independent learning hours was defined by the faculty by considering the specificities of the course, and the content volume of the subject area (including the number of pages of required literature for the module).

The programme is based on the premises of a century-old, traditional one-cycle Armenian MD (General Medicine) programme, which has recently been restructured with integrated elements to take into account current expectations of medical curricula. The integrative approaches were based on pre-defined quality standards with the objective to merge basic theoretical knowledge and recent advances in biomedical sciences and technical - clinical practice in a modular framework. The Russian programme is supported by a strong clinical environment - with 3 clinics under ownership and manyother contracted hospitals.

Development of the programmes has followed the strategies adopted by the YSMU. According to this policy, a proposal for programme design is first submitted to the Faculty Scientific Council for approval, based on a positive decision of the Faculty Quality Assurance Committee. During the review and approval of the programme, the extent to which the programme objectives, learning outcomes, curriculum structure, programme content and modules, and logistical resources meet the requirements of the Armenian national and sectoral qualifications framework, were assessed. The programme was intended to be submitted to the National Centre for Educational Quality Enhancement (NCEQE) for accreditation, and therefore compatibility with the Georgian sectoral benchmarks for medical programmes had to be taken into account.

This planned approach will ensure that the programme is well thought out and targeted, providing medical students with a strong educational foundation for clinical practice and reflecting the commitment of the HEI to contribute to the development of medical science. Indeed, the Russian educational programme follows the generally accepted principles of evidence-based medicine, analytical and critical thinking are taught throughout the curriculum, which may also enable students to participate in the scientific development of their profession. In addition, the programmes incorporate contributions from the behavioural and social sciences and theoretically enable effective communication and clinical decision-making. Adequate integration between basic medical sciences and clinical subjects also seems to be ensured, so in summary, the educational process based on this programme is expected to provide the enrolled students with the appropriate skills to take on clinical responsibilities after graduation and to continue their professional development.

The structure of the Russian language programme is defined in more detail in the SER. It is based on five "educational pillars", namely (1) General Education/Introduction to Medicine, (2) Structural Medicine, (3) Functional Medicine, (4) Preclinical Medicine or Basics of Pathological Medicine and (5) Clinical Medicine, respectively, and each of these pillars includes partially integrated horizontal and vertical links, as well as helically continued modules (as described in

Annex 2 of SER - YSMU MD Educational Program). Here it should be noted that the curriculum map was not suitable for proper navigation, providing only a list of the pillars and their (over 70) subdivisions. It should be added that a revised curriculum mapping can increase integration levels by connecting different subjects or courses to create a more cohesive curriculum. Better visual representation of the curriculum like a citation network for a scientific article, can show existing links between units, and new pathways, links that do not yet exist but are potentially relevant (e.g., phtysiology under pulmonology, cardiac surgery under cardiology, pediatric surgery under pediatrics, etc.) can also be discovered by this means.

It should be added that the structure of the programme could be made more understandable and easier to follow with a diagram (organogram) – showing the administrative, academic, and clinical units, departments, divisions, affiliated teaching hospitals of the study programme on the website of the HEI. The list the organizational units performing administrative and support roles in education, research would also be useful.

It should be noted here that the definition of the programme's components, its building blocks, the way in which the content of each of the major elements is defined is often unclear. Humanities (involving Latin and Medical Terminology, Armenian, Academic English, etc,) has probably not been included in the pillars, at least based on the descriptions on the front of the syllabi this seems likely. The pillars are further divided into numbered sub-chapters (e.g., “Homeostasis from Structure to Function” course belongs to Structural Medicine 4 and Functional Medicine 1 as well) the background of which is also not fully understood or less defined.

The modular teaching strategies within this scheme have been developed between 2022 and 2023, when the HEI merged and expanded several specialty courses (examples in SER are Traumatology and Orthopedics courses), increased the scale of research therein (to over 10 ECTS), increased the credit load of Paediatrics course, designed a novel, discrete course on practice-based skills, expanded thematic scope of Medical Psychology and Public Health courses, improved the assessment system in courses of Propaedeutics of Internal Medicine, Topographic Anatomy and Operative Surgery, and other courses. It should be mentioned here that in many cases, the terminology of the “pillars” does not adequately or fully cover the content of a module (e.g. when it falls into two pillars, e.g. Structural Medicine and Functional Medicine too, as it has been shown before) and besides, it is not entirely clear what the rationale was for placing a specific subject or subject parts in a particular module (e.g. joining jaundices and hyperuricemia with clinical manifestations and methods of investigation of the heart activity, as in Module 9, Functional Medicine 3).

According to SER a module contains courses that are more appropriate in terms of horizontal integration and ensure the most effective learning practices. Building on this premises, the new curriculum contains modular courses in natural sciences and biomedical sciences primarily in years 1-3, and clinical courses in years 4-6. In the 6th year of education, the curriculum is rotation type, supervisory participation in clinical aspects of patient care. The development of knowledge, skills and competences is completed in the 6th year and validated by a multi-phase final examination (multiple-choice question tests, oral examinations and OSCEs) evaluating the students’ clinical performance. The development and the demonstration of the ability to work in a medical team is also included in the curriculum, clinical practice-based aspects, practical

components of clinical subjects have been duly defined, and access to simulated scenarios and bedside clinical practice seems to be guaranteed. A structured quality control and support system is in use and employed in each programme, and the way and intensity of communication between supervisors, clinical mentors and students also seems to be appropriate.

According to “YSMU, MD Physician Educational Program” description the development of professional and ethical values happens in a spiral manner during the program implementation. Nevertheless, this position is less specified in the accessible documentation, which makes it somewhat difficult to analyse where and how the next stage is reached with enhanced theoretical and practical knowledge. Certainly, a separate diagram describing the "spiral features" - and the horizontal and vertical links between modules and learning outcomes would be of importance. As concerns the spiral feature, an “introduction - strengthening – reinforcement” cycle of a specified topic such as a BLS - ALS - Critical Care course sequence (or a similar training course at advanced level during Anaesthesiology and Intensive Care) can easily be included in the curriculum. The situation is similar for the preclinical and clinical courses involved in communication, much more use of already available and accessible practical opportunities (e.g., with well-trained simulated patients) is needed, with respect to the introduction, strengthening – reinforcement sequence. Furthermore, procedural skills (e.g., hand hygiene, injections, bandages, or surgical technical skills, etc.) could also be repeatedly assessed at pre-defined frequencies, and practical (hands-on) competencies and the need for re-training should be evaluated at appropriate time intervals (again, as part of a “spiral” curriculum).

In general, the LOs are logically distributed, well defined by the faculty at the micro level (per lecture/practical work in the curricula) and basically correspond to the requirements. Nevertheless, it should be noted again, that definition of the larger building blocks (i.e., “modules”) is much less clear. The way of composition of the module contents is not uniform, and the current modular structure can only be regarded transitional and significant, further modifications, grouping or regrouping of subjects and a more straightforward, simpler and transparent structure will be needed. Below are a few specific examples (but these are only illustrative, and there are several, similar cases where changes would be needed):

- In Annex 2 (“Syllabi” sub-folder) where electives, mandatory electives and compulsory modules are located, many of the modules seemingly do not belong to any of the “Pillars” (Clinical Skills - Patient Care in Surgery and Therapeutics or Medical Physics).
- There are no major discrepancies between the number of allocated ECTS and the actual students’ workload. Nevertheless, elective subjects are missing from the curriculum of Semester 1 of Year 1, Semesters 1 and 2 of Year 2, and Semester 2 of Year 4. Therefore, a balanced distribution of both mandatory and elective courses during each academic year/semester in YSMU MD Educational Program is needed. It is also recommended to offer more than 20 elective courses as stated in YSMU MD Educational Program.
- In certain cases, the connections of a specific module, more directly, the upstream relationships cannot be established with sufficient certainty (GenEdu/IntroMed 1 Medical Chemistry 1).
- Duplicate or redundant numbering makes it difficult to determine the positions of some modules in the structure with confidence (Module 7 is “Civil Defense and Practical Skills Module 2 - and Homeostasis From Structure to Function is also Module 7 in Structural

Medicine 4 and Functional Medicine 1); Module 1 is dedicated to Humanities 1 (History of the Armenian Civilization and History of Medicine) but there is also Module 1 in Structural Medicine 1 (Musculoskeletal system 1).

- In a number of cases interconnected or logically related educational units are grouped separately under distinct modules - these are usually labelled with “a’ and “b” letters - as in the case of Obstetrics or Surgeries (e.g., Module 38 is dedicated to Obstetrics and Gynecology 3a and a separate syllabus for Module 38 describes Obstetrics and Gynecology 3b).
- Artificial, somewhat forced fragmentation of topics and subjects into smaller modules has resulted in a lack of transparency in the structure and making it difficult to complete a module built on certain subjects – e.g. the prerequisite modules for Module 28 (Internal Medicine IIb, mostly endocrinology, liver and pancreas) are Modules 4,7,9,10,12,13,14,16A and 16B,17,19,20,21,23,25 and 28. This very broad set of requirements may make it difficult to admit the module.
- In some cases, the modular integration and somewhat forced linking of subject elements should be reviewed. For example, the merging of traumatology with cardiac surgery (Module 29 - Surgery IIa - Private Surgery and Traumatology) or military medicine with rehabilitation (in Module 42, gunshot wounds, crush syndrome, surgical and therapeutic assistance during combat situations with cardiovascular, neuro or musculoskeletal rehabilitation). In several clinical modules (as in this case) the connection between themes and topics is not too tight, and a new design is perhaps justified.
- The information received about the procedures for data protection policies of the HEI and regulations (such as during OSCEs) is ambiguous. The HEI is aware that the LO and student evaluation results are sensitive data and are treated confidentially but maybe but maybe it is timely to review the Institution’s established data protection policy to take care of data privacy issues.

Whilst the relationship of the modules and courses is not as clear as it might be in terms of integrative mechanisms, the various teams and academic units when interviewed were all aware of the details regarding their roles and responsibilities in the current educational processes. Therefore, the HEI should continue to modernize and modularize the programme, building on their commitment to introduce one-step, spiral and integrated learning experience. In this line, the University should develop an Action Plan detailing the activities, responsibilities, with timelines, and the nature of expected changes which should be made in this respect.

According to SER, the formation of research skills is ensured through relevant courses along a research skills axis, which is spirally mapped onto the curriculum (the credit load counts over 10 ECTS). Students start these courses in the 1st year of study (starting off the Academic Armenian and Academic English courses), continuing with the Essentials of Foundational Research, Biostatistics and Bioethics courses in the 2nd year. The development of research skills throughout to the subsequent stages is supported by a series of core Biomedical (e.g., Pharmacology in the 3rd year) and Preventive Medicine courses (in the 4th year), Health Law (in the 5th year) and Clinical Pharmacology courses (in the 6th year) and a number of elective courses distributed throughout the curricular 6 years. Indeed, the programme aims to develop a strong research component, therefore the new science course "Fundamentals of research" need

to be complemented and strengthened with other thematically compatible or related courses such as "Advanced Research Skills" (now elective, 2nd year 2nd semester), and a significant part of the curriculum can also be transferred to elective research-oriented courses “where students are immersed into biomedical research (clinical medicine, public health)”. Similarly, it is recommended to strengthen the spiral feature of the skills curriculum with existing courses (such as Patient Safety, now elective course, 3rd year, 1st semester).

Graduates have possibility to create their own research project, writing an academic paper and developing presentation skills. This is good practice which should be continued and improved, nevertheless, in this regard it will be essential to define uniform standards of form and content for the submitted materials.

The new COBRAIN centre provides excellent opportunities for a selected group of students to gain appropriate knowledge and skills in neurosciences. However, this opportunity is not available to a larger number of students, so the basic research activities of individual research groups and institutes, as well as the translational research activities of the university-affiliated clinics, need to be further strengthened and developed.

Surgery and surgery-related subjects make up a significant part of the practical curriculum, starting with Topographic Anatomy and Operative Surgery courses, then the subjects and topics are grouped under the responsibilities of Surgical Departments 1-3-4. A modular structure also enables the institution to adapt to changing requirements and trends in education. Today, the rapid advances in medicine and technology mean that there is a huge amount of textbook knowledge that change in a short space of time (e.g., ulcer surgery and its research has disappeared without a trace, and the same is predicted for many traditional surgical techniques, which are still in existence today). Balancing a medical curriculum that may be surgically dominant requires a strategic and collaborative effort among faculty, administrators, and students. In this scheme an increasing weight for Anesthesiology and Intensive Therapy and Critical Care is also suggested (currently 2 weeks in VI. year). The Intensive Care part of the module can be strengthened by several direct skills acquisition techniques in the Skills Center and when working with patients in the clinical bases of the department.

The integration of different “surgical” education and training courses such as anatomy, pathology, clinical skills, and surgical techniques should be continued in a coordinated manner, at the same level (horizontal) and on various stages of a learner's development (vertical and spiral). By aligning and coordinating the content across courses, redundancy in learning materials and concepts can be minimized. This saves time and resources for both educators and learners, creating a more holistic and interconnected curriculum. By implementing these strategies and continually reassessing the curriculum, a well-rounded medical education program can be created that prepares students for the full spectrum of medical practice.

In summary, the University should develop an Action Plan detailing the activities, responsibilities, with timelines, and the nature of expected changes which should be made in this respect. The content of the modules should first be defined, the thematic and logical coherence between modules should be designed, and the teaching units responsible for the modules should be identified. In this direction, encourage collaboration among faculty from various preclinical departments and clinical disciplines, they can work together to design a new structure that incorporate elements from preclinical courses with subjects of clinical medicine.

Evidence/Indicators

SER,
Annexes,
Interview results,
YSMU, MD Physician Educational Program description in Annex 2.

Recommendations:

The modular structure of the programme should be reviewed and modified, integration levels (horizontal, vertical and spiral components) should be developed based on a comprehensive, agreed educational strategy.

The University should develop an Action Plan detailing the activities, responsibilities, timelines, and the nature of expected changes.

The curriculum map and the links between the horizontal, vertical, and spiral elements of the curriculum should be reviewed and developed.

A balanced distribution of mandatory and elective courses during each academic year/semester is recommended. It is also recommended to offer more than 20 elective courses as stated in YSMU MD Educational Program.

Suggestions for the programme development

Review the Institution's established data protection policy to take care of data privacy issues.

Encourage collaboration between faculty from various preclinical departments and clinical disciplines to work together to develop a structure that incorporates elements of preclinical courses and subjects of clinical medicine.

The structure of the programme could be made more understandable and easier to follow with a diagram (organogram) showing the administrative, academic, and clinical units, departments, divisions, affiliated teaching hospitals. This could be presented on the website of the HEI.

In some cases, the English names of the courses are less clear - Private Surgery might be "General Surgery" and Topographical Anatomy and Operative Surgery - "Surgical Anatomy and Techniques".

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.4 Structure and Content of Educational Programme	☐	☐	☒	☐

1.5. Academic Course/Subject

➢ The content of the academic course / subject and the number of credits ensure the achievement of the learning outcomes defined by this course / subject.

➢ The content and the learning outcomes of the academic course/subject of the main field of study ensure the achievement of the learning outcomes of the programme.

➢ The study materials indicated in the syllabus ensure the achievement of the learning outcomes of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Based on the findings of self-evaluation and the recommendations of external experts, the Science Council of the General Medicine Faculty, the Council on Academic-Methodical Affairs, and the University Science Council have decided to shift to a fully modularized MD program in April 2023. The MD program includes modules instead of separate academic courses/subjects (except for three subjects in the first semester: medical physics, medical chemistry 1, and medical biology) and elective subjects. The structure of the modules and courses is based on "A Guideline for Aligning Academic Programs with the Armenian National Qualifications Framework" and the Institutional Guide on University Course Descriptions.

The syllabi include the following information: name and type of the module/course, number of ECTS, academic hours and distribution, authors and implementers of module, purpose of the module, prerequisites, teaching and learning methods, content of the module, assessment system, precondition for admission to the examination, education literature (required and supplementary), learning outcomes (LOs), programme learning outcomes to which this is mapped, field competencies, list of topics of lectures/practical classes. All Syllabi are formatted similarly across the curriculum.

The content of the modules ensures the achievement of desired LOs defined by the modules; the number of credits allocated to the modules are relevant to LOs. The content and LOs of the modules correspond to the LOs set by the MD program.

All syllabi include the required (mandatory) literature, which ensures the achievement of LOs and are relevant to the field of study. The syllabi are available for the students electronically.

The modules are organized in various formats within the modularized Curricula. In some cases, the module reflects one subject (module 33, 34, 38), while in other cases a module consists of two syllabi that cover different subjects (module 28):

Curricula	Syllabus
Module 28 - Internal **Medicine** II a b Gastroenterology Endocrinology Clinical Immunology and Allergy Rheumatology,	Module 28 - Internal **Diseases** II a (Clinical Immunology and Allergy, Rheumatology, Dermatology)
	Module 28 - Internal **Medicine** II b (Cover Gastroenterology and Endocrinology)

Dermatology	

In some cases the modular integration forces linking of subjects, however there is no need for their integration (for example Module 29, 42). In some cases, a very broad set of the requirements (for example module 28) make it difficult for admission. The syllabi provide information about the academic hours and their distribution. Nevertheless, there is a need to review the ratio of contact and independent hours. For example, some modules (such as Module 21 - Internal Medicine I a, Module 24 - Obstetrics and Gynecology 1 a, b, and Module 30 - Head and Neck Diseases) do not allocate time for self-study, even though the learning outcomes (LOs) include knowledge that will be assessed through multiple-choice questions (MCQs) as per the syllabus.

The required literature consists of textbooks and study materials developed by lecturers. The university has devised a strategy for peer reviewing and publishing academic literature. Each academic year, the Council on Academic-Methodical Affairs and the University Scientific Council approve new textbooks and updated manuals in the English language.

Evidence/Indicators

SER,

Syllabi,

Annexes,

Interview results.

Recommendations:

Review the structure of the modules (linking of subjects, connection between themes and topics, the prerequisites)

Suggestions for the programme development

Refine the definition of the module.

Review the distribution of academic hours.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.5. Academic Course/Subject	☐	☒	☐	☐

Compliance of the Programme with the Standard

1. Educational programme objectives, learning outcomes and their compliance with the programme	Complies with requirements	☐
	Substantially complies with requirements	☒
	Partially complies with requirements	☐
	Does not comply with requirements	☐

2. Methodology and Organisation of Teaching, Adequacy of Evaluation of Programme Mastering

Prerequisites for admission to the programme, teaching-learning methods and student assessment consider the specificity of the study field, level requirements, student needs, and ensure the achievement of theobjectives and expected learning outcomes of the programme.

2.1 Programme Admission Preconditions

The HEI has relevant, transparent, fair, public and accessible programme admission preconditions and procedures that ensure the engagement of individuals with relevant knowledge and skills in the programme to achieve learning outcomes.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The SER offers a detailed insight into the admission preconditions for the continuing and integrated MD programme at Yerevan State Medical University after M. Heratsi (YSMU). These preconditions are meticulously structured to ensure the enrolment of individuals equipped with the necessary knowledge and skills, thereby facilitating the achievement of the programme's learning outcomes.

The Higher Education Institution (HEI) has established admission preconditions and procedures that are transparent, fair, public, and accessible. This approach ensures that individuals with the relevant knowledge and skills are engaged in the programme. For instance, the document mentions that the enrolment planning within the MD programme refers to the analysis of internal and external demand, the institution’s resources, programme development strategy, and financial policy. This strategic approach ensures that the educational processes are administered smoothly, without overburdening the resources or compromising the quality of education.On average 41 students are admitted to the "General Medicine" Russian language educational program annually (the information on the admissions of each year was presented in the Self-evaluation report), the actual number of students is 244. According to the "Capacity Management Policy", the maximum annual capacity is 110 students, and the total maximum number of students for all years of education is 660 students.

Furthermore, the University collaborates with the Armenian Ministry of Education, Science, Culture, and Sports (MoESCS) to ensure the admission of Armenian citizens into the Armenian-taught MD programme. This admission process is organized in line with the “Procedure on Admission to State and Non-State Higher Education Institutions of the Republic of Armenia”, established by the Armenian Government. This alignment with the existing legislation ensures that the admission process is both legally compliant and transparent, providing a foundation of trust and legitimacy for both prospective students and stakeholders.

The document also highlights the specific criteria for admission. For instance, applicants can choose to take two out of three examinations in subjects of natural sciences, namely physics, chemistry, and biology, based on the specifics of the specialty. This ensures that the students admitted have a foundational understanding of the core subjects relevant to the medical field.

In terms of the methodology for planning the student body for the educational programme, the HEI has a well-defined approach. This methodology considers the unique characteristics of the programme and the available resources at the institution. Such a strategic approach ensures that the educational processes are administered smoothly. Students and alumni confirmed in interview that admission processes are clear, accessible and understandable.

In conclusion, the panel found substantial evidence that the criteria for standard 2.1 "Programme Admission Preconditions" are comprehensively met. The admission process is rigorous, transparent, and aligned with both the programme's objectives and the existing legislation. The logical linkage between admission preconditions and programme specifics ensures that admitted students are well-equipped to navigate and succeed in the programme.

Evidence/Indicators

Student body planning methodology for educational programme,

Interview results,

Educational programme,

Website.

Recommendations:

None

Suggestions for the programme development:

none

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
2.1 Programme Admission Preconditions	☒	☐	☐	☐

2.2.The Development of Practical, Scientific/Research/Creative/Performing and Transferable Skills

Programme ensures the development of students' practical, scientific/research/creative/performing and transferable skills and/or their involvement in research projects, in accordance with the programme learning outcomes.

It must be emphasised that the University maintains a solid system of requirements and assessment that allows for continuous professional development and regular feedback to students about the effectiveness of their learning process. The process is transparent and based on uniform principles. Practical skills are taught in the University's Simulation Centre (which provides numerous benefits for students), in university clinics and in various affiliated hospitals. In early semesters the technical skills are practiced on simulators and manikins in the Skills Center before a student enters clinical practice, and longitudinal development of clinical skills, ethical, communicational, and professional attitudes can be continued during Clinical Medicine (Pillar 5) modules. These approaches, together contribute significantly to the overall quality of medical education at YMSU.

As concerns the implementation details of the simulation skills training, appropriate space has been set for this purpose and the necessary equipment and materials have been identified. Students can acquire and refine a wide range of technical and clinical skills, from basic procedures like iv injections or cannulas insertion and wound care to more complex techniques, giving the possibility for every student to gain the sufficient, required amount on practical clinical skills, and provide additional opportunity for the interested, most motivated students to deepen their knowledge.

The Expert Panel noted that simulation training at the Skills Center allows students to practice and experience clinical scenarios that closely resemble real-life patient care situations, nevertheless, more emphasis should be placed on team-works in standardized simulated scenarios (with the prospective involvement of standardized patients).

In 2022-2023, 25 classrooms were equipped and renovated in the university-owned "Mikaelian Institute of Surgery" building to host the OSCE stations and exams. Overall, the opportunities and the technical background here are much above the expected standards. Nonetheless, there is always room for improvement in teaching technology and learning methods. Although the current background is very good, it can be further developed with diagnostic and technical/interventional facilities. The directions for procedural skills development will always depend on local interests and traditions, but typically relate to subspecialties in internal medicine and surgery, anaesthesiology and intensive care, imaging diagnostics, emergency

medicine, general medicine/family medicine, obstetrics and gynaecology, paediatrics (etc), and here are two examples/suggestions for ways forward: 1. teaching of surgical fundamentals and more advanced surgical techniques, procedures and practices could be more coordinated, starting with the basics (at Topographic Anatomy and Operative Surgery) and then moving on from there to further techniques of general surgery and subdisciplines at the Skills Center, with minimally invasive surgical workstations, simple simulation box trainers to develop the manual dexterity, the cognitive and technical skills of graduate students; and 2. the simulation of medical imaging with the use of diagnostic ultrasound (with anatomical phantoms and in vivo protocols) which can also be very useful.

In addition, bedside clinical practice plays an important role in the MD programme. Starting from 2023, a 12-month rotational clinical placement/integrated practice was introduced. Before starting this period, students will receive a special logbook containing a list of practice competencies and learning outcomes expected during the placement, and at the end of the study period the supervisor records the students' achievements in the logbook. Similar to the skills assessment at the Simulation Centre, the assessment of practical skills and competencies at the clinics is held through specifically designed exam sheets.

The Expert Panel emphasizes the advantage that the HEI has its own hospitals, where the students have ample clinical access to outpatients and hospitalized patients as well to practice and develop a range of technical, clinical and communication skills. During the site visit, the hospitals' clinical environment (wards, spaces for small-group studies, lectures and seminars) and the readiness of affiliated staff members was clearly demonstrated. In addition, the clinical tutors and hospital representatives confirmed their commitment to accept and teach foreign medical students and have also demonstrated the ways in which they can provide high-level practical education.

According to SER a research component is an essential part of the programme, and the advancement of student research skills is thoroughly detailed in the University's 2018-28/38 concept on science development. Starting from the academic year 2019-2020 an elective "Fundamentals of Research" course has been introduced as part of the curricular content of the second year of the programme. The course introduces the student to research concepts, methodologies, methods, literature use and information search skills, reading and analysis of scientific articles and medical guidelines, report writing and presentation. At the end of the course, students are required to successfully present and submit a final project. According to SER the content and duration of the scientific research components have been changed within other parts of the curriculum as well, specifically within the framework of Pharmacology, Hygiene and Ecology, Public Health courses. Here it should be noted that the quality of the research works and summaries of the students presented by the HEI during the site-visit was very variable, neither the form nor the content of these papers was standardised, and therefore it was not possible to establish their comparative value.

The Fundamentals of Research course also piloted a mentoring initiative, whereby graduates would mentor younger students and develop their own research skills. According to SER 17 students participated in this initiative between 2020 and 2022.

As part of volunteer initiatives, students of the MD programme participate in the research activities of the "COBRAIN" Scientific-Educational Centre for Fundamental Brain Research. Here

the students can acquire theoretical and practical skills to carry out high quality laboratory studies and for this purpose, students are provided with relevant literature, guidelines, instructions and equipment. However, it would be beneficial if a larger group of students could be directly involved in practical scientific research and learn about laboratory-experimental methodologies in order to build their experimental research skills in biomedicine. Such training could be part of an elective course (e.g. “Student Scientific Work”) in the curriculum.

In the last 5 years, 7 students from the University have published eight research papers and twelve theses in international journals. In addition, the Students Scientific Society makes efforts to involve students in various scientific events, in the last 5 years, they have organised and launched 39 scientific conferences and exhibitions and 4 research initiatives/projects.

In summary, the programme with its newly designed elements ensures the development of practical, scientific and transferable skills and the involvement of students in research projects, but a review of the programme (curriculum, syllabi and assessment methods) will be necessary during the following years, by clearly defining and listing the skills/ practical learning outcomes/research competency levels in the curriculum, and by transparently indicating these competencies and assessment levels at three levels: before the start of the courses, at mid-term and at graduation.

Evidence/Indicators

SER,
Interviews,
Annexes.

Recommendations:

Review the programme by clearly defining and listing the skills/research competencies in the curriculum.

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
2.2.The Development of practical, scientific/research/creative/performing and transferable skills	☐	☒	☐	☐

2.3. Teaching and Learning Methods

The programme is implemented by use student-oriented teaching and learning methods.

Teaching and learning methods correspond to the level of education, course/subject content, learning outcomes, and ensure their achievement.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The University has adopted a policy of student-centered teaching/learning strategy, it applies a wide range of different state-of-the-art educational methods, including skills lab training with use of good quality simulators, small group education with an optimized number of students for the specific tasks, video and audio recording of OSCE courses for the objective analysis of the teaching and learning process. Biomedical sciences are present throughout the curriculum of theoretical, pre-clinical, and clinical modules. Through the theoretical parts, students may obtain the knowledge that underpins both their scientific and clinical works.

Pre-clinical courses teach technical and clinical skills at the Skills Center that are directly applicable in the clinical setting, but students do not yet practice at the bedside. The Expert Panel noted that in clinical courses (e.g., Surgery), students apply these skills in practice, and they can use them in bedside situations, in contact with real patients.

According to SER the University is committed to improving all these teaching methodologies and learning activities; and to ensuring the introduction of modern information technologies into academia and research. The program documentation and the SER describe various teaching methods relevant to these objectives: concurrently with conventional teaching and learning methods (i.e., lectures, small-group instruction, practicals/workshops, lab courses, paper coursework, presentations, bedside teaching in all clinical courses) novel techniques, such as 3-D anatomy table, student-notepads, watching and streaming films and videos, journal clubs, team-based learning, interactive- and problem-based learning are also employed. The interviews revealed that the teachers are familiar with both conventional and modern learning methods, but a more widely use of modern teaching methods is suggested to encourage active learning techniques, such as problem-solving, case-based learning, and group projects, which can help students engage with the materials more effectively.

In order to develop research skills, specific courses (Fundamentals of Research and accompanying elective courses) are organised which can develop analytical thinking, creativity and critical thinking of students. For each course the LOs, teaching/learning/assessment methods, the ratio of theoretical/practical parts and literature data are given (basic textbooks and auxiliary information sources, instructional-methodical recommendations, audio/video materials) and a range of valid performance indicators are considered. The HEI has indicated its commitment to the development of scientific research, but it would be beneficial to strengthen the curriculum-based research work of students further (e.g. with elective courses for those who are participating in student scientific circles at the departments/clinics).

In summary, the teaching/learning methods are entirely in line with the appropriate level of education, correspond to the course content and its specificities and might ensure the achievement of program outcomes. The education system is backed up by well-developed IT services. According to SER the teaching and learning methods employed across the courses of

the programme are regularly reviewed and improved, if necessary, in line with the Plan-Do-Study-Act principle.

In conclusion, teaching strategies are fit for the different types of learning outcomes the programs are intended to develop. Strategies of teaching and learning and assessment set out in programme and course specifications are followed with flexibility to meet the needs of different groups of students. The program uses several adequate teaching-learning methods and relevant assessment techniques such as OSCEs to evaluate the students' preclinical academic performance but as an early warning, in the clinical settings the assessment criteria of practical skills should better be controlled and described. It is important to continually assess the effectiveness of these methods and adapt the curriculum as needed to ensure that students are making progress in both their language proficiency and medical knowledge.

Evidence/Indicators

SER,
Interviews,
Annexes.

Recommendations:
None

Suggestions for the programme development

A wider use of modern teaching methods is suggested; encourage active learning techniques, such as problem-solving, case-based learning, and group projects.

Place a stronger emphasis on communication skills in Armenian language.

E-learning approaches can be used more extensively to improve the didactic concept.

Strengthen the curriculum-based research work of students further e.g. with elective courses for those who are participating in student scientific circles at the departments/clinics.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
2.3. Teaching and learning methods	☒	☐	☐	☐

2.4. Student Evaluation

Student evaluation is conducted in accordance with the established procedures. It is transparent, reliable and complies with existing legislation.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Student evaluation is conducted in accordance with established procedures. It is transparent for every student and complies with existing University Regulation and legislation. Description of the assessment system is included in all syllabi. University diversified assessment methods in 2015, 2020 and 2022. Final attestation is administrated by the State Final Examinations Commission, and it complies with the existing national legislation. The OSCE tool was introduced for final attestation starting in 2022-2023 academic year.
The following grading system is used for the assessment of the students: 9-10 “excellent”; 7-8 “good”; 5-6 “fair” and 1-4 “fail”. There are two types of negative assessment:

(FX) Did not pass – less of minimal (5) grade, meaning that a student requires some more work before passing and is given a chance to sit an additional up to two examinations after independent work;

(F) Fail – less of minimal (5) grade after two additional examinations, meaning that the work of a student is not enough, and he/she has to retake the module.

The assessment methods employed in the program align with the learning outcomes (LOs) of the modules and the overall program. Clinical skills assessment utilizes Mini Clinical Assessment Exercise (Mini-CEX) and Direct Observation of Procedural Skills (DOPS) in clinical modules, while the Objective Structured Clinical Examination (OSCE) is employed for the final attestation. Clinical modules utilize checklists and logbooks for assessment.

In preclinical modules, practical skills assessment involves tasks such as the recognition of preparations, histological slides, pictures, images, and similar activities. In humanitarian modules, assessment methods may include participation in discussions, making presentations, and other relevant activities.

All final exams are conducted in the Department of the Computer-based Examinations Center, and students receive immediate feedback on their grades at the end of the exam.

The process for appealing students' assessment results is well-established and transparent. During interviews, students affirmed their familiarity with the appeals procedures.
The university has implemented mechanisms for preventing, detecting, and responding to plagiarism. Starting from 2022, the university has adopted a Policy on Academic Honesty and Plagiarism Prevention.

The university has transitioned from a test-based assessment system (single final exam) to a multi-component system for evaluating learning outcomes. However, for all modules, the weight of the final exam remains at 80%, with ongoing assessment accounting for 20%. Some courses, such as all elective courses and academic Armenian, employ a single final evaluation using "pass" and "no pass" criteria. In the old program, there were only final grades, and pass/not pass outcomes. The institution has started to change the old evaluation system, which should continue.This is important step and program director during the interview mentioned that they are working on future improvement of this ratio.

According to the self-evaluation report, the choice of assessment mode is influenced by the volume of the discipline and its corresponding learning outcomes. Nevertheless, there is a

uniform approach for all preclinical modules, clinical modules, and humanitarian modules. Only the science module employs a different assessment method.Whilstit is possible to use a standard/uniform approach, for example, for all clinical subjects, it is desirable to utilise individual approaches,

The syllabi include a description of the current oral survey, which is a component of formative/ongoing assessment. The mark is calculated based on students' activity, including their preparedness, participation in discussions, and presentation skills. However, the grading processes and rubrics for scoring should be more detailed, providing clearer criteria for students. For example, If the presentation is graded out of 10 points, it should be broken down even more into rubrics.

Evidence/Indicators

SER,

Program description,

Syllabi,

Annexes,

Interview results.

Recommendations:

Devise and implement detailed criteria and rubrics for scoring.

Suggestions for the programme development

Implement a multicomponent assessment system for all subjects.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
2.4.Studentevaluation	☐	☒	☐	☐

Compliance with the programme standards

2. Methodology and Organisation of Teaching, Adequacy of Evaluation of Programme Mastering	Complies with requirements	☐
	Substantially complies with requirements	☒
	Partly complies with requirements	☐
	Does not comply with requirements	☐

3. Student Achievements, Individual Work with Them

The programme ensures the creation of a student-centered environment by providing students with relevant services;promotes maximum student awareness, implements a variety of activities and facilitates student involvement in local and/or international projects; proper quality of scientific guidance is provided for master's and doctoral students.

3.1 Student Consulting and Support Services

Students receive consultation and support regarding the planning of learning process, improvement of academic achievement, and career development from the people involved in the programme and/or structural units of the HEI. A student has an opportunity to have a diverse learning process and receive relevant information and recommendations from those involved in the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Based on the information provided by the university in self-evaluation report, additional details gathered during the site visit, and interviews conducted with representatives of HEI and students it is evident that the university has implemented a comprehensive communication system, which includes regularly in-person meetings with the academic and administrative staff during the semester, scheduled consultation hours during the week and direct communication through university's official website and its social media platforms. During the consultation students can raise and discuss various topics, for example learning process, discussions on alignment of exam questionnaires and exam tests, educational material, personal matters and so on and get the needed advice from administrative and academic staff.

The University provides catch-up classes, which are free of charge for all the students who missed classes due to respectful reasons (illnesses). As a support for students who face tuition related finacial problems, the Office of the General Counsel concludes installment payment plan contracts.

The Department of Overseas Students' Affairs provides students with living arrangements (student hostel) and operates issues related to student legal status, lifestyle and cultural experiences.

The institution has different mechanisms for student integration in the internal university space. For example, 25% of the Scientific Council and 25% of the Board of Trustees arestudents. Another

example is that the University has a Student Parliament, which includes students from both national and international programmes. As a way of integration, the Student Parliament and Department of Physical Education collaboratively organize tournament-style sport events such as: football, basketball etc. The University has Cardiology club, Physiology club, which not only helps students expand their knowledge but also promotes interaction and integration among students from different backgrounds. The University also has a Cultural club, which gives students the opportunity to learn about each other's cultures.

The University has a Career Centre, which plays a very big role in educational, professional development. The Career Centre not only helps students with their career orientation through different projects, but also, keeps communication with graduates and if possible, offers job opportunities in hospitals the University has partnerships with.

In the framework of the programme, students have an opportunity to participate in different projects such as: "Lancet" surgical skills-transfer programme, where seniors teach and help their fellow junior students acquire basic surgical skills. Students can also be part of the COBRAIN Centre, where they can do various research. For example,during the site visit, students were doing research on Alzheimer's disease.Also, the university organizes events for students to present their reports and gives them the opportunity to publish their works in medicine, science and education journals.The university organizes different conferences dedicated to many topics such as: "Men's Health", "Liver transplant" and so on, for which they get certificates of attendance/participation.

The University Career Centre provides students with additional free of charge 3–6-month long classes within the scope of GLOBUS and FMGE study programme for the purpose of taking overseas medical licensing examinations afterwards.

The University provides an international student exchange programme through partnerships with different states of the European Union within Erasmus+ mobility programme (for instance, Universidade do Porto, Universidade de Santiago de Compostela, etc.). However, according to the statistics provided in the SER, during the last 5 years, only 10 students participated in the programme. The low number is explained by the lack of English language programmes in the host university/institution, curriculum differences, as well as the coronavirus outbreak.

Students are informed about various local and international projects and events through in-person meeting, The university website, which was demonstrated during the site visit,and social media networks (e.g.Facebook, Instagram, Telegram).Students are provided with an account on eStudent portal, where they can access all the information about their exams, timetable. They can also add opinions, requests and suggestions.

In conclusion, based on the information gathered from both SER and site visit, the university has established an effective mechanism for communication, consultation, learning and career

support services and integration for the students. Nevertheless, there are some areas of improvement regarding the international programs.

Evidence/Indicators

Interview with staff and students,

SER,

University Website and social media platforms,

eSTudent portal,

Consultation schedule-meeting with staff and students.

Recommendations:

None

Suggestions for Programme Development

Continue pursuingERASMUS+ programmes and form bilateral partnerships with different universities to increase the range of possibilities for students who want to participate in international programmes.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
3.1 Student Consulting and Support Services	☒	☐	☐	☐

Compliance with the programme standards

3. Students Achievements, Individual Work with them	Complies with requirements	☒
	Substantially complies with requirements	☐
	Partly complies with requirements	☐
	Does not comply with requirements	☐

4. Providing Teaching Resources

Human, material, information and financial resources of educational programme ensure sustainable, stable, efficient and effective functioning of the programme and the achievement of the defined objectives.

4.1 Human Resources

➢ Programme staff consists of qualified persons, who have necessary competences in order to help students to achieve the programme learning outcomes.

➢ The number and workload of programme academic/scientific and invited staff ensures the sustainable running of the educational process and also, proper execution of their research/creative/performance activities and other assigned duties. Quantitative indicators related to academic/scientific/invited staff ensure programme sustainability.

➢ The Head of the Programme possesses necessary knowledge and experience required for programme elaboration, and also the appropriate competences in the field of study of the programme. He/she is personally involved in programme implementation.

➢ Programme students are provided with an adequate number of administrative and support staff of appropriate competence.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The programme is implemented by 84 Professors, 144 Associate Professors, 199 Assistant Professors, 57 teaching assistants and 18 scientists; additionally, 38 invited staff are involved in the educational process. 398 academic staff have signed the affiliation agreement based on the University Affiliation Policy. Balance between academic and invited staff ensures sustainability of the programme. In the implementation of programme there are also foreign staff involved, 58 - in the teaching and 37 – in research. The number of students with active status is 156.
Recruiting academic staff is conducted through an open and transparent process, as confirmed by the lecturers during interviews.

Vacancies are announced on the university's official website and published in newspapers at least 1.5 months prior to the selection process. During the competition, faculty professional profiles are evaluated based on the criteria outlined in the Regulation on Job Responsibilities and Profile Descriptions for different academic ranks. The rules are objective, and the criteria are transparent. Considering the selection criteria, which include education, experience, scientific activities, and more, the competition ensures the attraction and hiring of qualified academic staff with the necessary competencies to help students achieve the program's learning outcomes.

The semester workload of academic staff, as outlined in Annex 11, primarily reflects the distribution of teaching hours by semester. The number of mandatory teaching hours aligns with the university's requirements (professor - 500 hours; associate professor - 750 hours; senior lecturer - 800 hours; teaching assistant - 500 hours). Additionally, it is mentioned in all syllabi that the workload of professors includes counselling time for students. During interviews, staff mentioned that their workload includes research activities and other assigned duties, such as continuing education, clinical activities, social activities, etc., which are reflected in the "Lecturer

Qualification Evaluation Questionnaire."The workload scheme for research is reflected in the ,,Regulation on the Academic Personnel'' and is defined for a period of 5 years. This workload of academic and invited staff ensures the proper execution of their educational and research activities, among other responsibilities. Additional documents, such as the workload of staff from the Department of Hygiene and Ecology, provide details about hours allocated for lectures, practical classes, research, and methodology.

The Director of the Program holds the position of Professor, MD, PhD, with a relevant educational background, teaching experience, and administrative expertise. The Director of the Program actively participated in the implementation of the new modularized program.

The educational program receives support from the university administration and other management services. The recruitment and election of support staff are organized based on the principle of transparency and in compliance with the Policies on Organizing and Running Electoral Competitions for Filling Vacant Positions, dated June 27, 2017. Applicants who meet the eligibility criteria outlined in the position descriptions can participate in the competition. The program is served by competent administrative and support staff.

Number of the staff involved in the programme (including academic, scientific, and invited staff)	**Number of Programme Staff**	**Including the staff with sectoral expertise[2]**	**Including the staff holding PhD degree in the sectoral direction[3]**	**Among them, the affiliated staff**
Total number of academic staff	**529**	**529**	**225**	**295**
- Professor	47	47	39	33
- Associate Professor	132	132	95	73
- Assistant-Professor (lecturer-senior lecturer)	235 (52 +183)	235 (52 +183)	76 (49 +27)	152
- Assistant	59	59	5	25
Visiting Staff	38	-	-	_
Scientific Staff	18	18	10	12

Evidence/Indicators

SER,

Annexes,

Interview results.

[2] Staff implementing the relevant components of themain field of study.

[3] Staff with relevant doctoral degrees implementing the components of the main field of study.

Recommendations:

None

Suggestions for Programme Development

Establish annual norms for scientific and other activities in addition to the teaching workload.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.1 Human Resources	☒	☐	☐	☐

4.3 Professional Development of Academic, Scientific and Invited Staff

➢ The HEI conducts the evaluation of programme staff and analyses evaluation results on a regular basis.
➢ The HEI fosters professional development of the academic, scientific and invited staff. Moreover, it fosters their scientific and research work.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

4.3 Professional Development of Academic, Scientific and Invited Staff

➢ The HEI conducts the evaluation of programme staff and analyses evaluation results on a regular basis.
➢ The HEI fosters professional development of the academic, scientific and invited staff. Moreover, it fosters their scientific and research work.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The HEI maintains a rigorous structure for regular staff evaluation. Since 2016, the University Centre for Education Quality Assessment and Assurance has been utilizing a 'Plan-Do-Study-Act' model, reflecting a commitment to education quality standards. Additionally, the Evaluation of Lecturer Qualifications model, which assimilates feedback from multiple stakeholders, exemplifies a comprehensive approach to academic performance assessment with its detailed questionnaires and a systematic five-year review.

Professional development at the HEI is facilitated by the Teacher Professional Development Department, established in 2013, which provides faculty with educational and research advancement opportunities, underpinned by institutional funding. The department encourages participation in both local and international training programs, aimed at elevating teaching and research competencies.

Further analysis of data from interviews with academic, scientific, and invited staff indicates that the university employs diverse methods to survey work quality. Staff management assesses the effectiveness of scientific circles and projects, while self-evaluation reports are used to gauge the satisfaction of scientific and teaching staff with their working conditions. These reports are instrumental for employees to voice their interests, challenges, and aspirations. The collected data are then processed and conveyed to the quality department for a thorough analysis, which informs evaluations and further professional development pathways.

The Secretariat of the Academic Council also contributes to these efforts by measuring data indicators designed to enhance lecturer qualifications. Invited lecturers play a role by delivering advanced training courses for academic and scientific staff, as well as program managers, on leadership, management, and accurate survey result assessment. The regulations governing the evaluation of Chairs and teaching staff qualifications at YSMU are detailed in the SER and other documents.

However, while the HEI's efforts in incorporating feedback into evaluations are evident, the specifics of how negative feedback directly contributes to staff development could be clarified. A more transparent and systematic follow-up procedure could be beneficial in converting feedback into actionable improvement plans.

Additionally, the current system of incentivizing research through financial means could be diversified. Providing a wider range of incentives may contribute to a more robust research culture, which is not solely driven by monetary compensation but also by academic support and recognition.

In summary, the HEI has established a framework for staff evaluation and professional development that aligns with expected standards. However, there is room to enhance the existing processes to ensure that they result in tangible improvements and adapt to the changing needs of the academic and scientific workforce.

Evidence/Indicators

Interviews with staff,

Analysis of the accreditation requirements (Annex13),

SER.

Recommendations:

none

Suggestions for the programme development

none

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.3 Professional development of academic, scientific and invited staff	☒	☐	☐	☐

4.4. Material Resources

Programme is provided by necessary infrastructure, information resources relevant to the field of study and technical equipment required for achieving programme learning outcomes.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The university campus is situated at the following address: 2 Koryun Street, Yerevan. The campus covers an area of 28,000 square meters, with 70% dedicated to classrooms and the remaining 30% used for administrative purposes.

Departments for basic subjects are located on the university campus, where you can find lecture halls, classrooms, an exam center, a library, an anatomical museum, a history of medicine museum, and administrative staff rooms. The lecture halls are well-equipped with the necessary devices and tools, and the classrooms can accommodate approximately 15 students. Departments for basic subjects such as Histology, Anatomy, and Pathological Anatomy are equipped with microscopes, macro- and fluid-preserved specimens, moulages, and all necessary equipment.

The Exam Center, also known as the Department of Computer-based Examinations, facilitates Multiple Choice Question (MCQ) examinations for the MD Program. It operates with 350 computers running on software provided by discrete institutional servers.

The library provides a comfortable environment and offers an extensive collection of printed and electronic resources. It houses around 440,000 medical books, journals, and other print sources. Over the past five years, the library has added over 2,800 print sources to its collection. Additionally, the library provides access to international scientific databases, journals, and e-

books. The University Library is a full member of the KOHA Pan-Armenian library, which includes 21 major libraries.

The required literature specified in the syllabi is available in the library. Digital copies of literature authored by university academic staff can be accessed through the university's digital platform (www.ysmubooks.am) and its electronic management system. Each student and staff member is assigned an official email ID (@meduni.am) to access the university's digital platform.

The university campus provides free wireless network access across the entire campus. Students have access to the Dr. Lex platform through a mobile application, as established in a memorandum of understanding between the Sylex Group and the university since 2020.

There are sports halls and a cafeteria for students.

For clinical teaching, the university manages three hospitals: Heratsi Hospital Complex No. 1, Muratsan Children's Hospital Complex, and the Mikayelyan Institute of Surgery, with a combined capacity of over 600 beds. The university also has memorandums with several other hospitals, providing a total capacity of 3,400 inpatient and outpatient beds for clinical teaching.

The University Simulation Centre, spanning 800 square meters and located in the Mikayelyan Institute of Surgery, is equipped with simulation manikins and relevant equipment. The Simulation Centre is annually furnished with equipment, with an average annual investment of AMD 200-250 million over the past five years. The university regularly updates the simulation resources of the center by at least 10%. The campus buildings and simulation center are accessible for people with disabilities.

The Mikayelyan Institute of Surgery also houses an OSCE exam space with 20 rooms equipped with relevant tools, which are used for educational purposes. In the spring semester of 2023, OSCE exams were conducted for the first time, and the surveillance system used for these exams is operational.

During the site visit, an expert panel visited the University Hospital (Mikayelyan Institute of Surgery) and one private hospital. In both hospitals, study rooms are available for students. Students are divided into groups and assigned to wards, manipulations, or operation blocks. They can observe consultations, manipulations, operations, and even perform basic surgical procedures with the patient's consent and under supervision.

The university provides convenient accommodation for students in a 700-bed student dormitory complex.

The Department for basic subjects, University Simulation Centre, and OSCE exam space cater not only to English MD program students but also to two similar MD programs with Armenian and Russian language of instruction. Therefore, additional equipment, mannequins, and simulators should be provided to accommodate the needs of all three programs adequately.

Evidence/Indicators

SER,

Annexes,

Interview results,

Observation during the visit.

Recommendations:

None

Suggestions for the programme development

Expand the resources of the Department of basic subjects and simulation center/OSCE exam.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.4 Material Resources	☒	☐	☐	☐

4.5 Programme/Faculty/School Budget and Programme Financial Sustainability

The allocation of financial resources stipulated in the programme/faculty/school budget is economically feasible and corresponds to the programme needs.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

In examining the financial underpinnings of the University's Russian-taught MD program, the panel noted strategic financial commitment and foresight, mirroring the rigor observed in the Armenian-taught counterpart. The Russian-taught MD program accounts for a noteworthy 4.0% of the University’s revenue from all its degree offerings. This deliberate financial blueprint underscores the program's essential role within the academic fabric of the institution and cements its long-term viability.

Budget allocations for this program are not only reflective of the University’s commitment to academic excellence but also indicative of a sustainable financial model. The comprehensive budget includes revenues generated directly from the program, supplemented by grants and a dedicated portion of the institution’s discretionary funds, which ranges from 0.6% to 1.0% of the program’s revenues. These funds are allocated with the intent to ensure the program's continued operation, sustainability, and scope for improvement.

The fiscal year for the program aligns with the calendar year, beginning on January 1 and concluding on December 31. This timeframe allows for a clear and structured financial governance process. Central to the program's financial planning are principles such as effective resource management, budget variance analysis, and the standardization of budgeting templates. This fiscal approach is tightly interwoven with performance indicators that are integral to the program's success, aligning with the University's Strategic Plan for 2021-2025.

In crafting the annual cash flow forecast for the program, several factors are taken into account. These include the University's strategic execution, the specific performance of the Russian-taught MD program, a thorough analysis of the prior fiscal year's budget, and the institutional departments' financial needs for the upcoming year.

The last five years have seen a marked amplification in the budget dedicated to material and clinical resources, enhancing the program's infrastructure and academic resources. Notable financial decisions include the University's acquisition of a substantial share in a 260-bed hospital and the purchase of a sizable property adjacent to the main campus. These strategic investments signify a concerted effort to bolster the program’s clinical and academic stature.

Despite these infrastructural advancements, faculty compensation has remained stagnant, raising concerns about the program's ability to attract and maintain high-calibre teaching staff. Nonetheless, there has been an increase in the number of faculty receiving bonuses and rewards, with allocations for these incentives rising by 150%. These rewards are tied to teaching performance, student progress, and evaluations, which incentivizes educational excellence.

The financial transparency of the program is bolstered by detailed budget sheets and comprehensive documentation of financial sources, which are integral to assessing the program's fiscal responsibility. The budget not only demonstrates fiscal prudence but also sets a benchmark for future financial strategies.

In summary, the University’s strategic financial management of the Russian-taught MD program has successfully facilitated notable programmatic and infrastructural enhancements. However, to preserve the program's reputation and efficacy, there is a pressing need to reassess faculty remuneration policies to remain competitive in the academic marketplace. The financial strategy must evolve to place greater emphasis on balancing infrastructural investment with the imperative of academic excellence, ensuring the program continues to attract and nurture top-tier educators.

Evidence/Indicators

Interviews with staff, students, and employers

Financial(program) budget of university

Recommendations:

none

Suggestions for the programme development

none

Evaluation

4.5. Programme/Faculty/School Budget and Programme Financial Sustainability	☒	☐	☐	☐

Compliance with the programme standard

4. Providing Teaching Resources	Complies with requirements	☒
	Substantially complies with requirements	☐
	Partly complies with requirements	☐
	Does not comply with requirements	☐

5. Teaching Quality Enhancement Opportunities

In order to enhance teaching quality, programme utilises internal and external quality assurance services and also, periodically conducts programme monitoring and programme review. Relevant data is collected, analysed and utilized for informed decision making and programme development.

5.1 Internal Quality Evaluation

Programme staff collaborates with internal quality assurance department(s)/staff available at the HEI when planning the process of programme quality assurance, developing assessment instruments, and implementing assessment process. Programme staff utilizes quality assurance results for programme improvement.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The MD programme’s approach to internal quality assurance is systematically articulated and comprehensive, exhibiting alignment with essential benchmarks of effective programme evolution and enhancement. The programme manifests a robust collaboration between its staff and the internal quality assurance entities within the higher education institution. This is evidenced in the strategic planning of quality assurance processes, the development of innovative assessment tools, and the meticulous analysis of various assessment outcomes.

For instance, the programme has created a repository of diverse assessment instruments such as surveys and evaluative studies.

A commendable array of stakeholders, including academic staff, faculty, students, alumni, and external collaborators such as employers, are integrated into the evaluative processes. However, it was noted that some stakeholders, such as employers, exhibited limited insight into the comprehensive intricacies of the evaluative processes, indicating a potential area for enhancing stakeholder education and engagement to optimize the value of their contributions.

In terms of continuous improvement, the programme demonstrates a proactive strategy, particularly through the internal quality assurance office's efforts in conjunction with programme staff. Their synergy facilitates the identification of areas necessitating enhancement, driving strategic initiatives aimed at rectifying identified weaknesses and promoting programme excellence. Teaching staff demonstrated clear engagement with IQA processes.

The programme's operational framework is marked by adherence to the "plan–do–check–act" principle, signifying a commitment to iterative quality assurance processes. Despite this, there are numerous ad hoc and one-off procedures in addition to regular monitoring activities. These include surveys of participation in lectures and Analysis of residual knowledge assessment results amongst others. Its unclear how these surveys contribute to systematic improvement of quality and their purpose is not clear. A strategic streamlining of these processes could enhance operational efficiency, reduce redundancy, and promote a more focused approach to quality assurance.

Furthermore, the programme could benefit from a simplification strategy aimed at consolidating and prioritizing the plethora of evaluative results. This would facilitate a more coordinated utilization of findings, driving more strategic and impactful improvements across the programme's spectrum.

In terms of adapting to technological advancements, the programme has mechanisms in place to ensure the quality of electronic and distance learning modalities. This reflects a strategic adaptation of internal quality assurance mechanisms to meet the diversified needs of contemporary educational delivery formats, ensuring a consistency in educational excellence across varied learning paradigms.

Evidence/Indicators

Internal quality assurance service (both the HEI and faculty/school) assessment results and changes made based on these results;

Programme/Educational programmes groups in a cluster related statistical data (student profiles, student's progression, student status suspension and termination rates, student's satisfaction in relation to the programme, graduates' employment rates, etc.);

Activities and changes made to eliminate weaknesses identified during self-evaluation report elaboration process;

Survey results conducted by higher education institution;

Methodology for implementing the learning process electronically / remotely;

Interview results.

Recommendations:

none

Suggestions for the programme development:

Further improve stakeholder insight and invest in initiatives aimed at enhancing the understanding and engagement of all stakeholders, especially external collaborators like employers

Simplify, streamline and prioritize evaluative results by developing strategies for consolidating evaluative findings and prioritizing them based on their strategic impact potential.

Explore opportunities for leveraging technological advancements in optimizing the evaluation processes. This could include the use of advanced analytics tools to enhance the analysis of evaluative findings.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
5.1 Internal quality evaluation	☒	☐	☐	☐

5.2 External Quality Evaluation

Programme utilises the results of external quality assurance on a regular basis.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The educational program was periodically evaluated by external experts. There are different ways university uses for improvement of the program:

- Every five years the University undergoes the institutional accreditation conducted by the National Center for Professional Education Quality Assurance Foundation (ANQA).
- University compared the MD program to other European programs.
- External evaluation by international expert was performed.

Based on all different evaluations, several recommendations were taken into account for the developmental purposes:

- e-University system is established, which includes learning management system. The electronic system will also optimize the collection of information needed for quality assurance-related processes.
- Integration of the program has increased- issues related to horizontal and vertical integration of disciplines, the scale of certain disinclines in the curriculum, the connection between the subject-specific programs and program learning outcomes are considered in the program.
- New teaching, learning, and assessment methods are implemented.
- Faculty development trainings towards new methodology of teaching and assessment, as well as formation of Learning outcomes has held.
- Multicomponent system of assessment started to implement: availability of an expanded component of differentiated assessment of practical skills in ongoing examinations of the core professional disciplines (mini- CEX, DOPS, etc.) surveys were designed for the purpose of assessing the practical skills.
- OSCE format exam was developed and introduced as a form of final attestation as summative form of evaluation of *Skills* and *Autonomy/responsibility* component. clinical scenarios as well as checklists were written by the faculty.
- For purposes of improving the MD program, the external expert indicates on the learning outcomes – the format of learning outcome assessment, the connection between the subject-specific program and program outcomes, etc. By bringing on the light the multi-componential system program tries to meet the requirements (more details are explained in the 1.2 and 1.3)

In conclusion, the university strives to take into account as much as possible the recommendations necessary to improve the program. Most of the existing evaluations have already been taken into account, some are included in the action plan. It is important that there is continuity in planning, execution, evaluation and process improvement.

Evidence/Indicators

SER,

Annexes,

Interview results.

Recommendations:

none

Suggestions for the programme development

none

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
5.2. External Quality Evaluation	☒	☐	☐	☐

5.3 Programme Monitoring and Periodic Review

Programme monitoring and periodic evaluation is conducted with the involvement of academic, scientific, invited, administrative, supporting staff, students, graduates, employers and other stakeholders through systematic data collection, study and analysis. Evaluation results are applied for the programme improvement.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The SER details the mechanisms and procedures the institution has implemented to monitor and periodically evaluate their MD programme. The SER references various stakeholders involved in this process, including students, alumni, faculty, administrative staff, and external professional associations. It also enumerates the tools and methods employed in this monitoring process, including surveys, studies, discussions, and observations. Specific examples, such as feedback leading to curriculum changes, are given to illustrate how the feedback loop works in practice. Moreover, there is an evident effort to ensure a continuous improvement cycle, where feedback and findings are used to refine and enhance the program. The Procedure for Monitoring and Revisiting University Degree Programmes stipulates that the university degree programmes are subject to a yearly monitoring within a six-month period, upon completion of the academic year. The programme emphasises the active participation of a diverse group of stakeholders in its monitoring process. As highlighted in the self-evaluation report, students, alumni, teaching faculty, administrative staff, employers, and professional associations are directly or indirectly involved in the quality assurance procedures and monitoring of degree programmes. This inclusive approach ensures that the programme receives feedback from all angles, leading to a holistic evaluation.While the programme already involves multiple stakeholders in its evaluation process, there could be more structured forums or platforms where these stakeholders can

provide feedback. Regular roundtable discussions or workshops could be organized to facilitate this.

The institution has mechanisms in place to adapt the programme based on the outcomes of their assessments. For instance, the pilot implementation of a modular approach in the programme was analyzed in 2021-2022. The quality assurance analysis revealed a higher level of residual knowledge and stakeholder satisfaction. As a result, a new modular spiral syllabus was developed for implementation from the 2023-2024 study year.

The institution employs a pre-determined classroom observation template to evaluate the teaching methodologies of academic and invited staff. This evaluation is conducted by peers, either from the same programme or from different programmes within the institution, ensuring an unbiased assessment. Students play a crucial role in refining the programme. They evaluate the main academic course/subject at the end of each term, providing insights into areas of improvement. The programme is periodically compared with similar programmes from foreign universities. This ensures that the programme remains updated with modern requirements and integrates best international practices. The programme's efficiency is gauged using complex indicators of monitoring results. If the assessment reveals areas of improvement, necessary modifications are made to enhance the programme.

In summary, the programme undergoes periodic monitoring and evaluation, involving a wide range of stakeholders. This systematic collection and analysis of information ensure the programme's continuous alignment with industry demands and academic rigor. The involvement of diverse stakeholders, from academic staff to employers, guarantees a holistic evaluation of the programme. The student parliament/self-government's role in the review process demonstrates the programme's commitment to including student voices in its evaluation.

Evidence/Indicators

Programme Evaluation methodology,
Results of Internal and External Quality Assurance,
Analysis and Practice of Application,
Interviews with staff, students and employers,
SER.

Recommendations

none

Suggestions for the programme development

While the programme already involves multiple stakeholders in its evaluation process, there could be more structured forums or platforms where these stakeholders can provide feedback. Regular roundtable discussions or workshops could be organized to facilitate this.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
5.3. Programme monitoring and periodic review	☒	☐	☐	☐

Compliance with the programme standards

5. Teaching Quality Enhancement Opportunities	Complies with requirements	☒
	Substantially complies with requirements	☐
	Partially complies with requirements	☐
	Does not comply with requirements	☐

Attached documentation (if applicable):

Name of the Higher Education Institution:**YSMU**

Name of Higher Education Programme, Level:**General Medicine, 7**

Compliance with the Programme Standards

Evaluation / Standards	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1. Education Programme Objectives, Learning Outcomes and their Compliance with the Programme	☐	☒	☐	☐
2. Teaching Methodology and Organisation, Adequacy Evaluation of Programme Mastering	☐	☒	☐	☐
3. Student Achievements, Individual Work with them	☒	☐	☐	☐
4. Providing Teaching Resources	☒	☐	☐	☐
5. Teaching Quality Enhancement Opportunities	☒	☐	☐	☐

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