ASIIN Seal

Accreditation Report

Bachelor's Degree Programme
Medicine

Provided by

Mongolian National University of Medical Sciences, Ulaanbaatar, Mongolia

Version: 29th September 2017

Table of Content

A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Хүний их эмч бэлтгэх хөтөлбөр	Undergraduate Programme in Medicine	ASIIN	none	10
Date of the contract: 16.12.2015 **Submission of the final version of the self-assessment report:** 24.05.2016 **Date of the onsite visit:** 14. – 16.06.2016 **at: Ulaanbaatar, Mongolia**				
Peer panel: PD Dr. Alois Palmetshofer, University Wuerzburg Prof. Dr. Thomas Reinheckel, University Freiburg Prof. Dr. Beate Brand-Saberi, University Bochum Prof. Dr. Hans-Joachim Wagner, University Tuebingen Oyundari Chuluunkhuyag, M. Sc, National University of Mongolia, PhD student				
Representative of the ASIIN headquarter: Rainer Arnold				
Responsible decision-making committee: ASIIN Accreditation Commission for Degree Programmes				
Criteria used: European Standards and Guidelines as of 10.05.2015 ASIIN General Criteria as of 04.12.2015 Subject-Specific Criteria of Technical Committee 10 – Life Sciences as of 09.12.2011				

[1] ASIIN Seal for degree programmes
[2] TC 10 – Life Sciences

In order to facilitate the legibility of this document, only masculine noun forms will be used hereinafter. Any gender-specific terms used in this document apply to both women and men.

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Bachelor Degree Programme for Medical Doctor	Bachelor of Science, MD	-	6	Full time	No	6 years	243 Mongolian Credit Points 388 ECTS	Fall semester 01.09.2014

For the Bachelor's degree programme for Medical Doctor the Mongolian University of Medical Sciences (MNUMS) has presented the following profile in its Self Assessment Report:

"Bachelor Degree program for Medical Doctor, is a full-time, system based block integrated, 6-year undergraduate program, which is offered by [School of Medicine] SoM, MNUMS. The program is mainly intended for Mongolian students but open for foreign students as well. Aim of the program is to prepare a competent "Medical Doctor" who is broadly educated and capable to work ethically and effectively in primary health care service, to continue advanced level of medical education.

Basic science courses for freshmen are intended to give the students basic knowledge on general science needed for undertaking higher education, for personal development to be humane and to lay the foundation for further study of professional courses. Basic professional courses are generally studied during years I, II and these give them the capacity to undertake basic medical education.

Clinical line and clerkship is a clinical science course which are self-directed program that plays an important role in improving the application of their theoretical knowledge, gained from the block lessons, gaining practical experience, developing their clinical skills and capabilities, and formulates the structure of their medical ethics and motivations required to become a competent medical doctor."

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

C Peer Report for the ASIIN Seal

1. The Degree Programmes: Concept, content & implementation

Criterion 1.1 Objectives and learning outcomes of a degree programme (intended qualifications profile)

Evidence:

- Self Assessment Report
- Discussions during the audit
- Homepage of MNUMS: http://medical.mnums.edu.mn/?page_id=2&lang=en

Preliminary assessment and analysis of the peers:

The auditors hold the view that the objectives and intended learning outcomes of the Bachelor degree programme Medicine are comprehensive and well founded: The students acquire a sound fundamental basis in natural sciences, mathematics and psychology. They gain methodological competences in medical and biological sciences and are able to carry out practical work in laboratories and hospitals. They are also prepared to become competent medical doctors that are capable to work as general practitioners in hospitals throughout Mongolia. They possess adequate clinical knowledge in basic medical subjects such as anatomy, physiology, histology and biochemistry and are moreover trained in the professional fields of clinical medicine, namely in: surgery, paediatrics, immunology, pharmacology, cardiology, pathology, radiology, urology, haematology, oncology, genetics, neurology, rheumatology, gastroenterology and epidemiology.

In addition the students have trained their analytical and logical abilities and have an awareness of possible social, ethical and environmental effects of their actions. During the course of their studies, the students have also acquired communicative skills, can work in a team and have developed a strategy for life-long learning.

The auditors are convinced that the intended qualification profile of the Bachelor degree programme Medicine is reasonable and useful: The students are capable to meet the health care requirements in Mongolia and can continue their studies to become a medical specialist.

The objectives and learning outcomes of the degree programme are accessible to the students via the homepage of MNUMS. Finally the peer group judges the objectives and learning outcomes of the degree programme to reflect the intended level of academic qualification (EQF 6) and to correspond with the ASIIN Subject-Specific-Criteria (SSC) of the Technical Committee 10 – Life Sciences.

According to the Self Assessment Report the Bachelor programme in Medicine aims to produce competent physicians who can apply medical knowledge, clinical skills and show professional ethics. The stated objectives are achieved by producing graduates, who have the ability to collect and interpret information, make clinical decisions, and carry out general diagnostic and treatment methods.

The main responsibility of organizations and institutions granting higher education is not only to prepare professional experts but to educate people, who have sense of responsibility for their profession, who are active in the society, and are skilled in communication.

The peers gain the impression that the goal of the programme is to prepare a competent medical doctor who is broadly educated and capable to work ethically and effectively at hospitals throughout Mongolia. The graduates should possess the necessary scientific knowledge, as well as adequate clinical and communication skills to meet the health care requirements in Mongolia and should be capable of pursuing continuous professional development.

The graduates work mainly in health care centers or local hospitals or are employed as emergency doctors or continue their professional education. Some graduates are completing postgraduate training in foreign countries.

The peers want to emphasise that from their point of view the students in the Medical Doctor programme acquire skills, knowledge and competences above the Bachelor level. They are well prepared to work as physicians without further academic education and to enter a speciality training / residency, i.e. internal medicine, radiology etc. In comparison to other countries e.g. to Germany the graduates are as qualified as the graduates of a degree programme with a state examination. As a consequence the peers consider the degree programme to be underrated; it is more similar to a graduate programme. Therefore, the university should think about a reform of the degree programme. A potential new curriculum could include three years of premedical and basic medical studies after which a Bachelor degree could be awarded. This could be followed by a graduate programme (three years of a master programme as a possibility). This would allow for more research activities during the Master programme and would offer the graduates the opportunity to receive an internationally recognized graduate degree that would allow them to join a PhD programme or a residency / speciality training abroad.

In summary, the auditors are convinced that the intended qualification profile of the degree programmes allows the students to take up an occupation which corresponds to their qualification. The degree programme is designed in such a way that it meets the objectives set for it, including the intended learning outcomes. They appreciate that MNUMS aims to train medical doctors who, following their graduation, are able to improve the sanitation and hygiene for the population, to take action on preventing diseases, can diagnose and manage common diseases, are competent in using various methods of medical treatment, possess the capabilities for providing emergency medical care, and are well prepared to work at the primary health care level.

The latest learning outcomes were formulated after the relevant stakeholders were involved by distributing questionnaires among students, graduates and employers and interviewing representatives of all groups. Therefore the auditors can confirm that while developing the objectives and learning outcomes MNUMS has also taken into account the situation on the national job market. In addition, the relevant stakeholders were included in the process of formulating and further developing the objectives and learning outcomes.

Criterion 1.2 Name of the degree programme

Evidence:

- Self Assessment Report
- Discussions during the audit
- Homepage of MNUMS: http://medical.mnums.edu.mn/?page_id=2&lang=en

Preliminary assessment and analysis of the peers:
The auditors hold the view that the name of the Bachelor degree programme Medicine corresponds well with the intended objectives and learning outcomes. There have been no misunderstandings concerning the name of the degree programme and the subject-specific community uses the name accordingly.

Criterion 1.3 Curriculum

Evidence:

- Self Assessment Report
- Discussions during the audit
- Homepage of MNUMS: http://medical.mnums.edu.mn/?page_id=2&lang=en
- Block handbook

Preliminary assessment and analysis of the peers:

The curriculum for the Bachelor degree programme Medicine has experienced a dynamic development within last few years and reflects the university´s vision and ambitious goal to become an internationally recognized institution of medical education.

The clinical departments of the School of Medicine (SoM) have the primary purpose to prepare general medical practitioners by implementing the Block Integrated Curriculum (BIC); it consists of 12 basic premedical subjects, 21 medical blocks (with 4-8 departments participating in each block course) and professional training or clerkship with 16 rotations.

A new premedical curriculum for the first two academic years has been developed and put in to work at MNUMS in 2014. It encompasses courses in the basic preclinical subjects and provides first insights into clinical practice. The preclinical curriculum has the advantage of providing the necessary basic biomedical knowledge and the basic contents of medical treatments at the same time. After finishing their 2 years of premedical courses, the student must pass an exam in order to be able to enter the Medical Doctor programme. By the end of the second year the students are ranked by their academic performance and can choose their subsequent degree programme. Students with the best marks usually choose the Medical Doctor programme. Other possible choices are Dentistry and Traditional Medicine.

The peers complain that there was not sufficient information provided about the courses of the first academic year. They therefore ask the university to submit the necessary documents.

The second phase of the curriculum which is the medical course lasts three years and is composed of 15 block courses that are based on organ systems. The teaching and learning is not conducted by each department separately but in the form of an integrated approach where all departments involved are supposed to jointly design the block courses and to coordinate the content and the teaching methods.

During the discussions the peers gain the impression that the integrated block curriculum is a very modern approach to a medical degree programme and they support the underly-

ing concept. Although the concept is sound, it needs to be improved in the daily implementation, because there is not enough personal interaction between the teachers from the different departments. This interaction and cooperation should be intensified as it is a key to the success of the integrated curriculum. Currently, the blocks are more like a mosaic that consists of singular pieces and they need to be merged together It is necessary that the representatives of the main clinical disciplines work together (e.g. the neurologist talks with the anatomist, or the physiologist about the design and content of the block courses).

The peers discuss with the heads of the departments, how the students are assigned to the different hospitals during the clerkship and how the clerkships are organized in general. They learn that there is a clerkship coordinator at each of the affiliated hospitals who supervises the students and the teachers and who is responsible for the medical education. The students can express their wishes, where they want to do the rotations of the clerkship. They spend between two and five weeks in each department of the hospital and two or three students are assigned to each doctor/teacher who supervises the practical work with the patients. The teachers are provided with checklists with the number of medical treatments and procedures that must be done during the clerkship. The peers especially commend that the doctors in the hospitals get paid for their teaching, get textbooks and educational material from MNUMS, are involved in research activities and have the opportunity to go to international conferences. In recognition of their efforts they receive a certificate for being a teacher for MNUMS. The students have to write a medical report about each treated patient and about the procedure taken.

In summary the peer group draws the conclusion that the curriculum of the Bachelor degree programme Medicine allows the students to achieve the intended learning outcomes.

Criterion 1.4 Admission requirements

Evidence:

- Self Assessment Report
- Regulations for Undergraduate Programmes at MNUMS

Preliminary assessment and analysis of the peers:

Admission to MNUMS depends on the grades of the high school graduates. In order to be accepted at MNUMS high school graduates must pass their School Leaving Certificate

with a certain grade and must achieve a threshold number of points in biology and chemistry.

Student's admission to MNUMS in general, is based on the results of a selection process that is defined by the Regulations for Undergraduate Programmes at MNUMS.

Applicants from rural areas will be selected by a joint committee appointed by the Mongolian Consortium of Universities and Colleges (MCUC). In general, applicants with the highest high school diploma score will be accepted into MNUMS. The admission quota for MNUMS is determined annually by the National Ministry of Education, Culture and Sciences. Due to the differences in population density in Mongolia, applicants from less-populated regions may be accepted with scores in the national examination below the average score in highly populated regions.

Starting from the academic year of 2015-2016, the tuition fee for each admitted student was 2.850.000 MNT (1500 USD) for each year. This amount is officially determined by MNUMS's Governing Board and is based on the amount of academic credits in the degree programme. Currently, an academic credit is worth of 75.000 MNT. During the discussions the peers learn that the tuition fee is paid by the students` parents and the amount is in general considered to be appropriate.

To enter the Medical Doctor programme, a student must complete the university requirements during the first two years of premedical studies.

In summary, the auditors find the terms of admission to be binding and transparent. They confirm that the admission requirements support the students in achieving the intended learning outcomes.

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

The peers take notice that MNUMS has submitted the module descriptions of the premedical courses and after a brief analysis judge them to be sufficient.

The peers appreciate that MNUMS understands good interpersonal, interdepartmental, even interschool interaction and collaboration between the lecturers is a key to the successful implementation of the integrated curriculum. MNUMS will try to overcome still existing problems by organizing regular meetings of the block coordinators and joint seminars for all involved faculty members.

Taking the statement of MNUMS into account the peers assess criterion 1 to be mostly fulfilled.

2. The Degree Programmes: Structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

- Self Assessment Report
- Block handbook
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The peers notice that the degree programme is presented in a modular form; it is a block integrated programme that was developed in order to enhance the consistency and continuity in medical courses. The integrated curriculum model is organized to enable the integration of basic sciences and medical sciences into one block course. This model is oriented towards problem solved learning, student centered training, multidisciplinary courses and extensive clinical practice.

During the 1st year the students take compulsory classes in the basic biomedical sciences such as: anatomy, physiology, histology, pathology, biochemistry, microbiology, immunology, molecular biology, genetics and pharmacology. In addition they can also choose elective courses out of the following areas: behavioral and social sciences, medical ethics, humanitarian sciences and public health.

The basic science courses during the first academic year are intended to give the students a basic knowledge on the natural sciences that lays a solid academic foundation for further studies of advanced medical courses.

From second to fifth year, the students study in various forms of the integrated block curriculum that consists of 21 blocks of medical courses. Details of the 21 blocks can be found in the appendix.

During the final year of the degree programme the students complete their clerkship at the different affiliated hospitals. The students learn how to make correct diagnoses, suggest adequate treatments and to conduct the medical procedures of health monitoring, disease prevention, rehabilitation and emergency care. They get the chance to practice their medical knowledge and get acquainted with the everyday routines of a physician. Clinical rotations during the clerkship are organized with the purpose of giving the stu-

dents the opportunity to encounter common diseases in Mongolia, such as in internal medicine, paediatrics, communicable diseases, obstetrics and gynecology, traumatology and orthopedics, family medicine, emergency and anesthesiology and general surgery. The students also attend seminars and lectures in order to be informed about the latest developments in medicine.

At the end of the second year the students must decide, which branch of medical studies they want to pursue. They have the choice between Medical Doctor, Dentistry and Traditional Medicine. If the number of applicants to a particular programme exceeds its capacity, students will be ranked according to their academic performance (grade point average in the first two years); and lowest ranking students may not be accepted to their first choice programme. Entrance into MNUMS in general and into the Medical Doctor programme in particular, is quite competitive with a very high ratio of applicants to actual accepted students. This reflects the high interest of prospective students in medical sciences and verifies the relevance of the Medical Doctor programme.

From the auditors point of view the structure of the degree programme ensures that the qualification level and the intended learning outcomes can be achieved and that the students can complete the degree programme successfully without any delay.

With respect to the recognition of credits gained at other institutions the peers learn that the current regulations do not comply with the Lisbon Convention, which states that achievement and competences acquired at another higher education institution must be recognised unless *substantial differences* can be proven by the institution that is charged with recognition, in this case by MNUMS. The peers thus conclude that the rules for the recognition of achievements and competences acquired outside of the higher education institution must be changed in order to comply with the Lisbon Convention.

The peers discuss with the heads of the departments whether there are windows of mobility for the students and point out that the international visibility and reputation of a university is increased by its research activities and the academic mobility of staff members and students. Both issues should be addressed by MNUMS in order to become an internationally recognized medical university. To achieve these goals especially the obstacles for students to study abroad should be resolved and credits acquired abroad should be recognized without any problems. Furthermore, students should get introduced to research activities early in the curriculum and the workload lowered so that there is more room to follow individual academic interests. MNUMS also should support their graduates if they want to do a residency in a foreign country.

In addition, the peers recommend to offer more scholarships and to encourage the students to go abroad during the degree programme. By signing a learning agreement before

the stay abroad it could be ensured that the credits acquired at the foreign university are accepted at MNUMNS. The peers learn moreover that there is a new cooperation agreement in the surgery department with a South Korean university. 10 students are sent there every year. The peers gain the impression that more students complete a stay abroad than are shown in the corresponding table of the Self Assessment Report. As a consequence, they suggest to update the statistical data and to find out how many students exactly spent some time abroad and during what stage of the degree programme they visit a foreign university.

In the eyes of the peer group a critical aspect of the degree programme is a missing compulsory final thesis or project. They learn that only during block 20 “Research Methodology“ the students get acquainted with different areas of applied research such as principles of medical treatment, detection of symptoms, signs of common diseases, disease prevention and public health. The projects in block 20 are usually team projects and the peers point out that it is important for every student to get firsthand knowledge of research methods and should not only take part at a team project. They expect that an individual research project is introduced into the curriculum as a compulsory component. This issue is also discussed under Criterion 3 (Exams).

In summary, the peer group concludes that the blocks have been adapted to the requirements of the degree programme and they confirm that the learning objectives generally help to reach the qualification level and the overall intended learning outcomes.

Criterion 2.2 Work load and credits

Evidence:

- Self Assessment Report
- Block handbook
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The degree programme awards 243 Mongolian credit units (CU) in 12 semesters, divided into basic medical courses (44 credit units), summer practice (9 credit units), medical courses (127 credit units) and clerkship (63 credit units). Compared to the ECTS system, the total number of credit units gained in the entire degree program is equivalent to 388 (243 x 1.6 = 388.8) ECTS credit points. In Mongolia, 1 credit unit corresponds to 48 hours

of workload. In detail, for every 1 hour of lecture the students have 2 hours of self-study, for every 2 hours of seminar or practical work the students have 1 hour of self-study per week.

The academic year of MNUMS consists of two semesters each of which lasts for 20 weeks. Therefore, the avarage workload per year is 40 CU or 1920 working hours. Under the assumption that 1 ECTS credit point equals 30 working hours this results in a conversion ratio of 1.6 between Mongolian credit units and ECTS credit points.

The peers learn that most students finish the degree programme without delay and that the drop-out rate is rather low. They see that as clear evidence for the adequate workload and the overall quality of the degree programme. This impression is confirmed during the meeting with the students which attest that the work load is high but with effective time management and serious effort every student can pass the exams.

The only critical point raised by the students is the workload in the first academic year. The students have to adjust to a new learning environment and must cope with the high demands of the different premedical courses. The peers support this point of view and suggest reducing the workload in the first year by concentrating on subjects related to medical training. In particular, courses in Mongolian History and Mongolian Language do not seem to be an essential part of a degree programme in medicine and are already taught during high school time.

In summary, the auditors conclude that there seems to be no general structural pressure on the quality of teaching and the level of education due to the workload. The workload appears to be realistic, and the students are able to complete the degree programme without exceeding the regular time frame.

Criterion 2.3 Teaching methodology

Evidence:

- Self Assessment Report
- Block handbook
- Discussions during the audit

Preliminary assessment and analysis of the peers:
According to the Self Assessment Report the adoption of the new integrated block curriculum was accompanied by the introduction of the new and modern teaching methods,

such as changing from teacher centered into student centered learning and from knowledge oriented towards problem solving oriented learning.

Student centered learning is conducted in classrooms, laboratories, hospitals and in simulated clinical conditions. The simulated clinical conditions allow to create a safe clinical practicing environment and to apply an effective approach of systemic medical training. By participating in healthcare training simulations the students can acquire the necessary medical competences without distressing real patients and yet gain practical medical experience close to real life situations. Therefore, students have more opportunities to make clinical decisions on their own. Interactive and e-lectures, discussions and presentations are also part of the courses.

An essential part of the degree programme is problem based teaching and learning in all block courses. It is a student-centered teaching method in which students learn about a subject through the experience of solving an open-ended problem. The goals of problem based learning are to help students to develop flexible knowledge, effective problem solving skills, self-directed learning, teamwork and time management skills and effective communication skills. The problem-based learning is delivered through simulation based training utilizing the simulators for clinical applications.

Problem based learning (PBL) includes working in groups, identifying what the students already know, what they need to know, and how and where to access new information that may lead to the resolution of the problem. The role of the teacher is to facilitate learning by supporting, guiding, and monitoring the learning process, he should build students' confidence to take on the problem, and encourage the students, while also stretching their understanding. PBL represents a paradigm shift from traditional teaching and learning philosophy, which is usually more lecture-based.

In addition, teachers instruct classes at hospitals near the patient’s bedside (bedside teaching). This teaching method allows students to gain practical medical experiences such as interacting with patients, working in authentic conditions, learning from medical practitioners and collecting and analyzing information about a patient in a short time.

In summary, the peer group judges the teaching methods and instruments to be suitable to support the students in achieving the learning outcomes. Furthermore, they commend the problem based learning concept and consider the degree programme to be well balanced between attendance based learning and self-study.

Criterion 2.4 Support and assistance

Evidence:

- Self Assessment Report
- Block handbook
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The School of Medicine provides a support system for all students on different levels. It includes consultations with an officer for academic affairs about scholarships, graduation requirements and general study regulations and with an officer for student affairs about enrollment and job opportunities. On a more personal level there is an advisor for each course. His task is to motivate the students to participate in student clubs and to give advice on all questions concerning the social-humanitarian life of the students.

The elaborated system for support and assistance of the students is one of the strengths of MNUMS. The peers emphasise that the teachers are accessible and the organization and the performance of the clerkships is commendable. They are very positively impressed by the student club system where older and more experienced students get in contact with young students and can pursue projects that are in their common interest. The clubs are usually affiliated with the different departments of MNUMS and offer the students the opportunity to broaden their scientific knowledge, to take part at team projects and to develop their individual interests.

The peer group notices the good and trustful relationship between the students and the teaching staff; there are enough resources available to provide individual assistance, advice and support for all students. The support system helps the students to achieve the intended learning outcomes and to complete their studies successfully and without delay. The students are well informed about the services available to them.

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

The peers support the plans to expand the student exchange and to update and to improve the regulations for the recognition of credits gained at other higher education institutions. The changes are supposed to bring the regulations in accordance with the Lisbon-Convention for the recognition of student achievements and competencies acquired outside of MNUMS. Since the regulations have not been changed yet, the peers retain the corresponding requirement.

The peers are glad to hear that courses in Mongolian history and Mongolian language have become electives, which will reduce the workload for the first year students. Until a new curricular overview is presented, the peers retain the corresponding requirement.

Taking the statement of MNUMS into account the peers assess criterion 2 to be mostly fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation

Evidence:

- Self Assessment Report
- Block handbook
- Discussions during the audit
- Homepage of MNUMS: http://medical.mnums.edu.mn/?page_id=2&lang=en

Preliminary assessment and analysis of the peers:
According to the Self Assessment Report due to the implementation of the integrated block curriculum, the degree programme has fewer examinations than other medical programmes. The first year students are assessed by the summative examination in basic sciences subjects that takes place at the end of the first year of the degree programme. The 2nd year students are assessed in each of the blocks 1-6 and have to pass the OSCE-I (Objective Structured Clinical Examination).

After the first two years of premedical education the students can continue their medical education based on their GPA-level. If a student does not reach the minimum GPA-level of 2.0 he can repeat some classes in order to improve his marks and to continue his studies.

Students in the 3rd, 4th and 5th year are assessed by exams of the blocks 7-21 and OSCE-II. The final year students are assessed during the clerkship through OSPE I and OSPE II (Objective Structured Practical Examination) and at the end of the degree programme through OSCE-III and the final theoretical exam.

In the course of the degree programme the students' achievements are assessed by different methods such as multiple choice questionnaires (MCQ) based on different types of

clinical cases, oral examinations, essays, OSCE, OSPE and computer based tests. There is also an ongoing monitoring of the students' progress in their studies; it is evaluated by the teaching staff on the basis of attendance and preparation for the classes.

There are altogether three OSCE examinations to assess the students' practical skills and medical knowledge by using patient dummies and tools in a simulated environment. OSCE provides the opportunity also to assess the student's communication skills and his ability to do anamnesis and make suggestions for an appropriate treatment. Generally, each OSCE has 6-8 stations, each station taking 6-8 minutes. The evaluator has a checklist to evaluate the student's communication and clinical skills. The student will get points each time he performs the required actions.

After completing 31 weeks of clinical rotations the 6th year students will be eligible to enter OSPE. The purpose of OSPE is to assess the students' knowledge, skills and competencies in 4 stations: anamnesis, physical examination, diagnosis and treatment and consultancy. The exam lasts 5 minutes in each station and the examination questions are submitted by the professional departments involved in the clinical rotations. The exam is organized twice per academic year.

If a student fails a block course, there is a second chance for examination. The student may repeat the block in the way of a summer course if sufficient attendance was not achieved (illness etc.). There is a general schedule for re-examinations and a regulation for exams. Each subject of the block course must be completed before taking the final exam, and only a failed subject needs to be repeated.

The peers gain the impression that OSPE and OSCE are well organized and are an efficient and state-of-the-art way of assessing the students' academic achievements.

The peers confirm that there is a form of assessment for each course and that all students are well informed about the form of assessment and the details of what is required to pass the course. The organization of the exams guarantees that delays in the study progress are avoided. The relevant rules for examination and evaluation criteria are put into a legal framework, as both students and lecturers confirm in the audit discussions. The date and time of the exams and how the exams are taken is announced to the students in due time at the beginning of each semester.

As mentioned before, the peers emphasise that an individual final project should be part of the compulsory curriculum, the result of which should be documented in the form of a written report or an oral presentation. This report is usually called "Bachelor Thesis". Projects leading to the Bachelor Thesis could well involve teamwork, as this is an important aspect of employability which is often neglected in traditional medical degree courses.

Thesis presentation can be used as a tool for improving presentation skills. The intention of the Bachelor Thesis is for the graduate to successfully complete an individual research project. This is important not only for those going on to further studies, but also for those leaving MNUMS with a Bachelor`s degree, for whom it is vital that they have personal first-hand experience of individual scientific work. The quality standards, the supervision and the form of assessment of the Bachelor Thesis should be transparent. Keys to a successful Bachelor Thesis are the intellectual and scientific input of the student, the comprehension of the project, organization and planning besides a well-written report.

The peers expect that the School of Medicine introduces a mandatory thesis or individual research project into the curriculum which ensures that the students work on a set task independently and at the academic level aimed for.

The peers come to the conclusion that besides the critical issue of a non-compulsory thesis or individual project, the criteria regarding the examinations system, concept, and organization are fulfilled.

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

The peers appreciate that MNUMS recognizes the need to continuously reform the degree programme and to focus on developing individual the students` individual research capabilities through introducing research activities early in the curriculum and through conducting individual projects. MNUMS plans to introduce a mandatory Bachelor thesis and the peers will verify this in the course of the fulfilment of requirements.

Taking the statement of MNUMS into account the peers assess criterion 3 to be mostly fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:

- Self Assessment Report
- Staff handbook

Preliminary assessment and analysis of the peers:
The peers notice that MNUMS has a large academic staff and is well-equipped for teaching. They confirm that the composition and qualification of the teaching staff is suitable to sustain the Bachelor degree programme and that there are enough resources available for administrative tasks and supervision and guidance of the students.

The auditors are very impressed by the open minded atmosphere among the students and the staff members and the dedication of the staff members in general. There is definitely no gender problem, 70% of the students are female and also among the staff females are very well represented.

In the discussion with the heads of the departments the peers learn that a decrease in the number of admitted students is planned for the next years, because including the growing number of graduates from the private medical schools, there are enough medical doctors in Mongolia. The peers appreciate that this will not result in a similar reduction of staff members and suggest using the free resources to increase the research activities, including the design and supervision of individual thesis projects of the undergraduate students. This would improve the university`s academic standing and offer the opportunity to involve more students in research activities. In addition the university should also think about increasing their efforts to get more research grants by the private sector.

The peers learn moreover that in average 40% of the academic staff`s workload is dedicated to research activities in the area of common diseases among the population, biomedicine and biotechnology, maternal and child health, nursing and public health. In order to foster the international reputation of MNUMS, the peers suggest shifting the focus towards more basic research. Currently, research is more related to problems directly connected with common social and medical problems and basic research has no tradition at MNUMS, e.g. the biomedical branch was established only in 2006.

A very positive aspect is the combination of teaching at MNUMS and practical work at the hospitals. MNUMS pays the academic staff although they do not necessarily teach fulltime at the university but work part time as medical doctors. This allows for the integration of their professional experience into their courses and offers the opportunity for the students to gain firsthand knowledge of medical problems and treatments.

Criterion 4.2 Staff development

Evidence:

- Self Assessment Report
- Staff handbook

Preliminary assessment and analysis of the peers:
The peers learn that at MNUMS there is a Center for Development of Teachers that offers trainings and workshops for academic and non-academic staff members. The staff development program is designed to improve the didactic performance, team building, work ethics, computer skills, communication skills and technical competences of staff members. In addition scholarships are available especially for young staff members. By this means they get the opportunity to attend programmes at foreign universities in order to improve their competences in the area of teaching methods, as well as syllabus and course content development. As a result, faculty members are sent to Japan, USA and Europe for further medical education, scholarships for these activities are provided by the government.

Finally, the School of Medicine regularly organizes both national and international seminars and invites guest lecturers from all over the world. The seminars can be attended by all staff members which gives them insight in modern research areas and current developments in the medical area.

During the discussion with the peers the members of the teaching staff emphasise that the courses offered by the Center for Development of Teachers are in high demand and well recognized. Moreover, they express their satisfaction with the support by the university and the opportunities for further didactic and scientific development. Stays abroad are integrated into the calculation of the annual workload and enough grants are available.

In summary, the auditors confirm that with the establishment of the Center for Development of Teachers MNUMS offers sufficient support mechanisms and opportunities for staff members who wish to expand their professional and teaching skills. The staff development is considered to be one of the strengths of MNUMS.

Criterion 4.3 Funds and equipment

Evidence:

- Self Assessment Report.

- On-site-visit of the laboratories

Preliminary assessment and analysis of the peers:

During the audit the peer group also visits some laboratories, teaching rooms and the nearby Central State Hospital in order to assess the quality of infrastructure and technical equipment. They notice that there are no bottlenecks due to missing equipment or a lacking infrastructure. The technical equipment is, with some exceptions, up to date and available in sufficient numbers. Especially the microbiology and physiology laboratories as well as the skill labs and the library are commended by the peer group. The MNUMS library offers access to electronic scientific and educational resources and to the electronic library system, including current publications that are needed for study and research.

A "Clinical Core laboratory unit" has been set up recently with some state of the art equipment for molecular biology and cellular analysis, including laser scanning and electron microscopy, next generation DNA sequencing, a real time PCR machine as well as liquid chromatography combined with mass spectrometry analysis. Furthermore, it also houses a small animal experimentation facility including breeding and experimentation rooms and equipment. Currently, there are only opportunities to keep mice and rats under conditions required for animal experimentation. A total of approximately € 2 Mio has been invested for the setup of the core research unit. During the on-site-visit the auditors gain the impression that the new laboratory offers a good opportunity for research efforts in the area of experimental medicine and that it will contribute to research activities of different research groups. Advanced students who will be involved in ongoing research projects should be trained to use this equipment in order to benefit in their research efforts. Although this will only apply for a small number of graduates and postgraduates and thus not be really relevant for educational purposes in the Medical Doctor programme, the long term impact and significance of the clinical core laboratory unit as a starting point to develop the medical school towards scientific excellence is obvious and highly appreciated by the peers. This also includes the efforts to support the unit by startup companies including technical service of the machines or the synthesis of nucleotides and peptides.

During the visit of the anatomy department the peers notice that the rooms in the basement do not have sufficient air conditioning or ventilation. This may present a health and safety hazard in view of the toxic fixation media for cadavers and specimens. Efforts should be made to offer the dissection of cadavers as a compulsory element of teaching for all students. One of the corridors is lined with glass containers containing a series of horizontal sections of a human cadaver. This is a good idea; however, the seal of many containers is not perfect resulting in the severe deterioration of the sections due to desic-

cation. In summary, the technical equipment and the infrastructure of the anatomy department is not state of the art and does not conform to modern standards. As a consequence, the peers strongly recommend updating and improving the technical equipment and the infrastructure of the anatomy and department.

In the suboptimal case that dissection can not be carried out, the number, as well as the quality of mummified dry preparations on the one hand and dissected specimens immersed in fixatives in glass jars on the other hand, would be insufficient. Furthermore, the availability of such specimens in jars is likely to restrict the use of these materials to the rooms of the anatomy department and severely hinders their use in integrated courses, which are a core feature of the Medical Doctor programme. Therefore, the peers suggest introducing plastinated specimens that may be studied with greater ease, and readily transported to lecture or seminar rooms as required by the respective course. Such specimens may be produced by the department itself; alternatively, they can be purchased. In addition, the availability of collection of various plastic models would improve the quality and outcome of the anatomy courses.

While visiting the histology department the peers saw a room lined with long tables on which a sufficient number of modern light microscopes were placed. They also had the opportunity to inspect a box with light microscopic slides. Exemplary verification showed paraffin sections with HE staining of mediocre quality purchased from commercial sources. The peers consider the number and quality of the microscopes as adequate. The number and quality of the microscopic slides, however, is substandard. The peers suggest establishing a modern histology/pathology lab and start the production of a collection of modern microscopic preparations using traditional as well as modern staining techniques including immunocytochemistry. In addition, plastic embedded and thin sectioned tissues should be introduced.

According to the self assessment report, MNUMS is going to have its own University teaching hospital with 150 beds, up-to-date diagnostic and treatment facilities in 2018. It will provide the opportunity to improve bedside teaching and the clinical of the students.

The students express their general satisfaction with the available resources and conditions of studying and they are content with access hours and working places for studying in groups, thereby confirming the positive impression of the peer group.

The auditors conclude that there are sufficient funds and equipment and that the infrastructure (laboratories, library, seminar rooms etc.) in general complies with the requirements for sustaining the degree programme.

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

The peers take notice that MNUMS plans to improve the infrastructure of the Anatomy Department by equipping the rooms in basement with good air conditioning or ventilation. According to MNUMS the construction is in process now and MNUMS administration has granted a budget to the Anatomy Department in order to update the specimens, and to prepare and to purchase plastic models and microscopic slides.

Taking the statement of MNUMS into account the peers assess criterion 4 to be mostly fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Self Assessment Report
- Block Handbook
- Homepage of MNUMS: http://medical.mnums.edu.mn/?page_id=2&lang=en

Preliminary assessment and analysis of the peers:
The auditors confirm that the module descriptions are accessible to all students and teachers via the university`s homepage. As mentioned before, the auditors complain that only the descriptions of the blocks were available to them, whereas descriptions of the courses of the first academic year were missing. They ask the School of Medicine to provide these descriptions and to make them available to all stakeholders, especially to the students.

In general, the block handbook includes all necessary information about the block`s objectives and content, its link to the programme objectives as well as prerequisites, workload, teaching methodology, exam requirements, literature and teaching staff. There are just some inconsistencies concerning the workload and the awarded credits. Therefore the block handbook should be edited in this respect.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Self Assessment Report
- Sample Diploma Supplement
- Sample Transcript of Records

Preliminary assessment and analysis of the peers:
The peer group notices that a Diploma Supplement and Transcript of Records are issued after graduation. The Diploma Supplement contains information about the structure, content and the obtained results. However, the peer group points out that the Diploma Supplement does not include information about the individual performance of the student as well as statistical data regarding the final mark and information about the composition of the final mark. They ask MNUMS to change that and to include this information in the Diploma Supplement.

The peers discuss with the heads of the departments the design of the Transcript of Records. They learn that the design was recently changed and does not include the marks of the blocks but only marks for each subject. This change was made, because graduates complained that employers did not know what the blocks included and therefore could not classify the marks. The peers understand, that the marks in the Diploma must be understood by all stakeholders and suggest to issue a Transcript of Records that includes the marks for the blocks as well as marks for each subject.

Criterion 5.3 Relevant rules

Evidence:

- Self Assessment Report
- Homepage of MNUMS: http://medical.mnums.edu.mn/?page_id=2&lang=en

Preliminary assessment and analysis of the peers:
The auditors confirm that the rights and duties of both the School of Medicine and the students are clearly defined and binding. All relevant course-related information is available in Mongolian and English and accessible for all stakeholders.

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

The peers take notice that a Diploma Supplement is handed out to graduates since this year, and MNUMS plans to include information about the individual performance of the graduates. In addition the Transcript of Records will include the marks for the blocks and the courses.

The peers emphasize that the module descriptions should be revised in order to avoid inconsistencies with respect to the workload and ECTS credits.

Taking the statement of MNUMS into account the peers assess criterion 5 to be mostly fulfilled.

6. Quality management: Quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Self Assessment Report
- Discussions during the audit
- Homepage of MNUMS: http://medical.mnums.edu.mn/?page_id=2&lang=en

Preliminary assessment and analysis of the peers:

The auditors ask the head of the School of Medicine about the quality management system at MNUMS. They learn that there is a continuous process implemented to improve the quality of the degree programme and it is carried out through various mechanisms, such as the assessment of the learning process by lecturers and regular internal evaluations from all stakeholders, including students. The evaluation of the programme is also conducted by monitoring various parameters, such as the students GPA, duration of study, students' satisfaction and drop-out rates.

Students provide feedback through questionnaires that are filled out online every semester for each course. The head of the degree programme compiles the results of the evaluations and gives feedback to the faculty involved. The course evaluation aims to continuously improve the degree programme and to create a supportive and effective learning environment for students. In addition, also graduating students and alumni are asked to

fill out online questionnaires concerning their academic experience in the degree program, their preparation in the medical sciences to successfully achieve their career goals. The analysis of the questionnaires is done by the faculty`s assessment board and forwarded to the entire faculty for continuous improvement of the degree programme.

During the meeting with the students, the peers learn that the students are involved in the development of the study programme, e.g. there is a speaker for each semester that meets regularly with the dean of the School of Medicine and discuss about students' problems and possible changes in the degree programme.

The auditors gain the impression that the feedback is taken into account by the head of the degree programme and changes are made if there is negative feedback. They confirm that the School of Medicine regularly monitors and reviews the degree programme and the block courses to ensure that they achieve the objectives set for them and respond to the needs of the students.

External quality assessment of the degree programme is provided by the accreditation of the degree programme by the National Council for Higher Education Accreditation of Mongolia and in addition the degree programme has been evaluated by the Association for Medical Education in the Western Pacific Region (AMEWPR) in 2012.

Finally, in 2015 experts from the Institute for Education, University of the Groningen (Netherlands) and Werklund School of Education, University of Calgary (Canada) evaluated the Medical Doctor programme.

The peers can attest that policies and processes are in function at MNUMS that form a cycle for continuous improvement and contribute to the accountability of MNUMS. They especially appreciate the establishment of a new independent quality assurance department that will be responsible for conducting and implementing a university-wide quality management system and monitor its results. It supports the development of quality culture in which all internal stakeholders assume responsibility for quality and engage in quality assurance at all levels of MNUMS.

In summary, the peer group confirms that the quality management system is suitable to identify weaknesses and to improve the degree programmes. The students and all other stakeholders are involved in the process.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 6:

Taking the statement of MNUMS into account the peers assess criterion 6 to be fully fulfilled.

D Additional Documents

Before preparing their final assessment, the panel asks that the following missing or unclear information be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

1. Module descriptions for all preclinical courses (including the electives).

E Comment of the Higher Education Institution (15.08.2016)

The institution provided a detailed statement as well as the following additional documents :

- Module descriptions of the premedical courses

F Summary: Peer recommendations (29.08.2016)

Taking into account the additional information and the comments given by MNUMS the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditaiton
Ba Medicine	With require-ments	--	30.09.2022

Requirements

A 1. (ASIIN 5.2) Ensure that the Diploma Supplement contains statistical data with regard to the final grade in accordance with the ECTS-users` guide.

A 2. (ASIIN 3) Ensure that the degree programme comprises a thesis or final project for all students. A concept how an individual research project is introduced into the curriculum as a compulsory element must be presented.

A 3. (ASIIN 5.1) Ensure that the module descriptions are revised in order to avoid inconstancies with respect to the workload and ECTS credits.

A 4. (ASIIN 2.1) Ensure that the rules for the recognition of achievements, skills and competences acquired outside the higher education institution are in accordance with the Lisbon-Convention.

A 5. (ASIIN 2.2) Ensure that the curriculum in the first semester is redesigned in order to avoid peaks in the workload.

Recommendations

E 1. (ASIIN 4.3) It is recommended to update and improve the technical equipment and the infrastructure of the anatomy and histology department.

E 2. (ASIIN 2.1) It is recommended to improve the interaction of the different departments and to further develop the integration of the block courses.

E 3. (ASIIN 2.2) It is recommended to reform the curriculum in the first semester with the goal to offer only courses that are related to medical training.

E 4. (ASIIN 1.1, 1.2) It is recommended to reform the curriculum in order to be able to award a master degree at the end of the programme.

G Comment of the Technical Committee 10 – Life Sciences (02.09.2016)

Assessment and analysis for the award of the ASIIN seal:

The Technical committee agrees with the suggested recommendations and requirements of the peer group.

The Technical Committee 10 – Life Sciences recommends the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Medicine	With requirements	--	30.09.2022

H Decision of the Accreditation Commission (30.09.2016)

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

The ASIIN Accreditation Commission for Degree Programmes decides to use the same wording for requirement A4 as in other accreditation procedures in order to make clear that the requirement refers to credits acquired at other higher education institutions. A recommendation is added because the Accreditation Commission wants to emphasize that these rules should comply with the Lisbon-Convention.

The Accreditation Commission for Degree Programmes decides to award the following seals:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Medicine	With requirements for one year	--	30.09.2022

Requirements

A 1. (ASIIN 5.2) Ensure that the Diploma Supplement contains statistical data with regard to the final grade in accordance with the ECTS-users` guide.

A 2. (ASIIN 3) Ensure that the degree programme comprises a thesis or final project for all students. A concept how an individual research project is introduced into the curriculum as a compulsory element must be presented.

A 3. (ASIIN 5.1) Ensure that the module descriptions are revised in order to avoid inconstancies with respect to the workload and ECTS credits.

A 4. (ASIIN 2.1) Define the rules for the recognition of credits acquired at other higher education institutions.

A 5. (ASIIN 2.2) Ensure that the curriculum in the first semester is redesigned in order to avoid peaks in the workload.

Recommendations

E 1. (ASIIN 4.3) It is recommended to update and improve the technical equipment and the infrastructure of the anatomy and histology department.

E 2. (ASIIN 2.1) It is recommended to improve the interaction of the different departments and to further develop the integration of the block courses.

E 3. (ASIIN 2.2) It is recommended to reform the curriculum in the first semester with the goal to offer only courses that are related to medical training.

E 4. (ASIIN 1.1, 1.2) It is recommended to reform the curriculum in order to be able to award a master degree at the end of the programme.

E 5. (ASIIN 2.1) It is recommended that the rules for the recognition of credits acquired at other higher education institutions are in accordance with the Lisbon-Convention.

I Fulfilment of Requirements (29.09.2017)

Analysis of the peers and the Technical Committee (07.09.2017)

A 1. (ASIIN 5.2) Ensure that the Diploma Supplement contains statistical data with regard to the final grade in accordance with the ECTS-users` guide.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: MNUMS will issue a Diploma Supplement to all its graduates and has submitted a sample Diploma Supplement that includes all necessary information.
TC 10	fulfilled Vote: unanimous Justification: The Technical Committee agrees with the assessment of the peers.

A 2. (ASIIN 3) Ensure that the degree programme comprises a thesis or final project for all students. A concept how an individual research project is introduced into the curriculum as a compulsory element must be presented.

Initial Treatment	
Peers	partly fulfilled Vote: per majority Justification: MNUMS has redesigned Block 20 and introduced an individual project as a compulsory part of the curriculum. The module encompasses 9 ECTS credits, there are still 3 credits spent for lecture and seminar and only 6 ECTS credit belong to the individual project work, which, in addition, is obviously restricted to topics in epidemiology. Scientific projects could be found or designed in various other fields of medicine too.
TC 10	fulfilled Vote: unanimous Justification: MNUMS has submitted an updated version of the

	description of block 20, which makes it clear that each student carries out an individual project. However, the restrictions on topics and scope remain. The Technical Committee is of the opinion that the requirement is fulfilled, but MNUMS should be informed in the decision letter that a widening of the possible topics and an extension of the scope of the individual project would be useful.

A 3. (ASIIN 5.1) Ensure that the module descriptions are revised in order to avoid inconstancies with respect to the workload and ECTS credits.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: The module descriptions have been revised and are consistant with respect to the workload and ECTS credits.
TC 10	fulfilled Vote: unanimous Justification: The Technical Committee agrees with the assessment of the peers.

A 4. (ASIIN 2.1) Define the rules for the recognition of credits acquired at other higher education institutions.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: MNUMS has defined the rules for the recognition of credits acquired at other higher education institutions.
TC 10	fulfilled Vote: unanimous Justification: The Technical Committee agrees with the assessment of the peers.

A 5. (ASIIN 2.2) Ensure that the curriculum in the first semester is redesigned in order to avoid peaks in the workload.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: MNUMS has re-designed the curriculum in the first

	semester which has resulted in a sufficient reduction of the students‘ workload.
TC 10	fulfilled Vote: unanimous Justification: The Technical Committee agrees with the assessment of the peers.

Decision of the Accreditation Commission (29.09.2017)

Degree programme	ASIIN-label	Subject-specific label	Accreditation until max.
Ba Medicine	All requirements fulfilled*	--	30.09.2022

*The Accreditation Committee for Degree Programmes decides to include the following reference into the notifying letter to the HEI:

“A widening of the possible topics and an extension of the scope of the individual project in block 20 would be useful and will be reviewed in the context of the re-accreditation of the Bachelor’s degree programme Medicine.”

Appendix: Programme Learning Outcomes and Curricula

According to the Self Assessment Report the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Medicine:

"Students who have completed Block Integrated Curriculum (BIC) on medicine at the School of Medicine (SoM) will be able to:

1. Demonstrate an understanding of basic knowledge of the modern biology, physiology, behavioral and social sciences

2. Explain the normal structure and function of the human body and mind with an understanding of stages of human life

3. Demonstrate an understanding of the mechanisms by which pathology modifies normal structure and function to generate symptoms, signs and abnormal laboratory findings

4. Discuss of the various causes and mechanisms underlying diseases among children, adolescents and adults

5. Define diagnostic tools and explain efficacy and adverse effects of therapeutic interventions

6. Apply their knowledge of clinical pharmacology, nutrition, behavior and rehabilitation therapies

7. Argue about management of the primary health care

8. Demonstrate understanding of Reproductive health, family planning, pregnancy planning and counseling, primary health care in reproductive diseases and pathology, urgent and emergency obstetrics

9. Promote health education and preventive medicine

10. Identify individual, family, socio-economic, cultural, religious and environmental determinants of health

11. Explain of the organization and delivery of healthcare service, financing, health insurance, health related legal documentation

12. Identify concepts of demographic health status

13. Demonstrate an understanding of ethical behavior and professionalism

14. Determine the epidemiology of common communicable and non-communicable diseases in various population groups

15. Identify important determinants of health and the economic, psychosocial, and cultural factors that contribute to disease.

16. Develop an approach useful in reducing the incidence and prevalence of disease

Students who have completed BIC at the SOM must be highly skilled in providing care to patients and will have ability to:

1. Obtain an appropriate and accurate medical history

2. Do both a general and an organ system specific physical examination

3. Perform common clinical procedures in relevant situations

4. Investigate the patient's problem

5. Select appropriate and available diagnostic tools for patients

6. Interpret the results of commonly used investigations and laboratory manifestations of both common and important diseases

7. Apply clinical reasoning in solving diagnostic and treatment problems

8. Communicate and inform with patients, their family, and medical staffs

9. Advise patients and obtain informed consent before providing any kind of clinical procedures

10. Conclude what is a life-threatening condition and provide emergency medical care for unconscious patient

11. Manage the medical tools and equipments at the primary care under antiseptic and aseptic rules.

12. Determine approaches useful in reducing the incidence and prevalence of disease, and intervention during infectious disease outbreaks, and provide epidemiological supervision.

13. Organize primary and secondary diseases prevention interventions, promote behavior change and conduct health education activities among population

14. Collaborate with a wide range of stakeholders to manage family medicine practice

15. Use information technology

16. Retrieve, manage, and utilize relevant information for solving medical problems

Students who have completed their degree from SOM must be able to demonstrate ethical behavior and professional attitude:

1. Honesty and integrity in all professional interactions

2. Maintenance of confidentiality

3. Respect for patients' right to self-determination, privacy and dignity

4. Compassionate management of patients

5. Commitment to advocate the interests of patients

6. Understanding and respect for cultural, religious and racial differences

7. Understanding of the special needs of minority groups and those with disabilities

8. Understanding of the ethical basis of medical practice and major ethical issues in medicine

9. Ability to recognize and analyze the ethical content of clinical situations

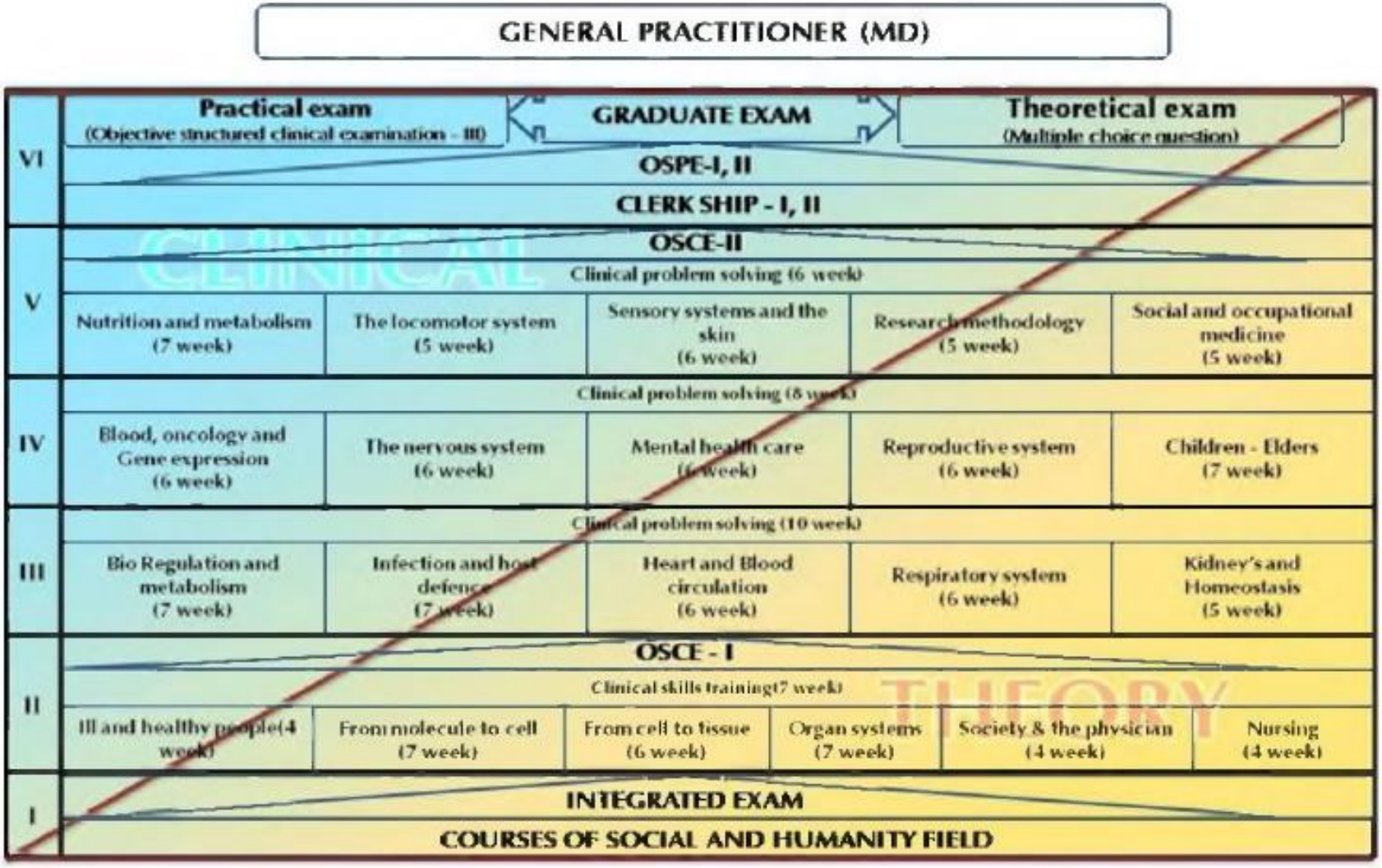
10. Tolerance of clinical and ethical uncertainty

11. Understanding of, and respect for, the roles of all health care professionals

12. Acknowledge personal strengths and weakness, recognizing when to seek counsel and assistance

13. Commitment to critically assess and continuously improve personal knowledge and skills"

The following **curriculum** is presented:



COURSE 1	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
	GB MODULES	47	1232	272	288	352	1344						0
SUMMER PRACTICE II,III,IV	**Lessons**	**Block training**						**Clinical skill training**					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
	SUMMER PRACTICE	9	288				144						0
ELECTIVE COURSE	**Lessons**	**Block training**						**Clinical skill training**					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
	ELECTIVE COURSE	6	144				144						0
COURSE-2 LINE	**Lessons**	**Block training**						**Clinical skill training**					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
	Basic professional skill							7,6	184	30	110	14	194,8

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 1. HUMAN, HEALTH AND PATHOLOGY	**Human, health and Pathology**	**4**	**102**	**32**	**60**	**10**	**90**	**0**	**0**	**0**	**0**	**0**	**0**
	Morphology	0,5	12	4	8								
	Physiology	0,6	16	4	8	4							
	Pathophysiology	0,7	16	6	8	2							
	General practice	0,5	12	4	8								
	Microbiology	1,0	24	8	16								
	Immunology	0,6	16	4	12								
	Biostastistics	0,3	6	2		4							
	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 2. MOLECULES TO CELLS	**Molecules to cells**	**7**	**154**	**62**	**80**	**12**	**182**						**0**
	Histology	0,3	6	2	4								
	Biochemistry	1,8	44	12	32								
	Molecular biology	2,4	48	28	20								
	Genetics	0,5	12	4	8								
	Microbiology	0,9	20	8	8	4							
	Physiology	0,8	18	6	4	8							
	Pathology	0,3	6	2	4								

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 3. CELL TO TISSUES	**Cells to tissues**	**6,1**	**150**	**46**	**100**	**4**	**142,8**						**0**
	Histology	1,4	36	8	28								
	Physiology	0,8	18	6	8	4							
	Immunology	0,6	16	4	12								
	Biochemistry	0,6	14	6	8								
	Pharmacology	0,3	6	2	4								
	Pathophysiology	1,3	30	10	20								
	Pathology	1,3	30	10	20								

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 4. ORGAN SYSTEMS	**The organ systems**	**7**	**167**	**51**	**108**	**8**	**169**						**0**
	Morphology	2,5	62	18	44								
	Histology	1,1	27	7	20								
	Physiology	1,8	42	14	20	8							
	Pathophysiology	0,5	12	4	8								
	Radiology	0,8	18	6	12								
	Pathology	0,3	6	2	4								

		Block training						Clinical skill training					
	Lessons	**Credit**	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**		**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
BLOCK 5. SOCIETY AND THE PHYSICIAN	**Society and physician**	**4**	**86**	**28**	**34**	**24**	**106**						**0**
	General practice	1,1	28	8	8	12							
	Psychiatry	0,4	10	2	8								
	Preventive medicine	0,9	22	8	10	4							
	Biostastistics	0,4	10	2		8							
	Health economic	0,4	8	4	4								
	Nursing	0,4	8	4	4								
		Block training						**Clinical skill training**					
	Lessons	**Credit**	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
BLOCK 6. BASIC PROFESSIONAL SKILLS	**Basic professional skill**	**3**	**64**	**16**	**48**	**0**	**80**						**0**
	Nursing	1,6	40	12	28								
	Surgery	0,7	19	3	16								
	Paediatric disease	0,2	5	1	4								

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 7. BIO-REGULATION AND METABO-LISM	**Bio Regulation and Metabolism**	**6**	**136**	**42**	**82**	**12**	**152**	**0,6**	**16**	**4**	**12**	**0**	**12,8**
	Paediatrics	0,8	18	6	12			0,0	0				
	Immunology	0,3	6	2		4		0,0	0				
	Biochemistry	0,6	14	6	8			0,0	0				
	Physiology	0,1	4		4			0,0	0				
	Pharmacology	0,6	16	4	12			0,0	0				
	Genetics	0,5	12	4		8		0,0	0				
	Endocrinology	2,7	66	20	46			0,6	16	4	12		
	Lessons	**Block training**						**Clinical skill training**					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
BLOCK 8. IN-FECTION AND BODY PROTEC-TION	**Infection and body protection**	**8,1**	**207**	**59**	**104**	**28**	**197,8**	**1,4**	**38**	**6**	**32**	**0**	**29,2**
	Pharmacology	0,4	11	3	4	4		0,0	0				
	Pathophysiology	0,3	6	2		4		0,0	0				
	Microbiology	1,5	36	12	16	8		0,0	0				
	Infectious disease	1,9	48	12	36			1,4	38	6	32		
	Immunology	2,3	52	20	24	8		0,0	0				
	Tuberculosis	2,0	54	10	24	4	16	0,0	0				

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 9. HEART AND BLOOD CIRCULATION SYSTEM	**The heart and the blood circulation**	**6**	**136**	**50**	**72**	**12**	**154**	**1,6**	**50**	**6**	**44**	**0**	**26,8**
	Cardiology	2,4	57	21	36			1,5		6	36		
	Pharmacology	0,4	8	4	2	2		0,0					
	Rehabilitation	0,2	4	2			2	0,1	4		4		
	Pathology	0,6	14	6	8			0,0					
	Paediatric disease	0,4	11	3	8			0,0					
	Morphology	0,3	8	2	6			0,0					
	Pathophysiology	0,5	13	3	8	2		0,0					
	Physiology	0,6	14	6	4	4		0,0					
	Laboratory	0,1	2	2				0,1	4		4		
	Histology	0,2	5	1		4		0,0					

	Lessons	Block training						Clinical skill training					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
BLOCK 10. RESPIRATORY SYSTEM	**The respiratory system**	**7**	**176**	**48**	**98**	**10**	**180**	**1,8**	**46**	**10**	**36**	**0**	**40,4**
	Pulmonology	2,6	64	20	44			1,6	42	10	32		
	Laboratory	0,3	6	2	4								
	Rehabilitation	0,4	10	2		4	4						
	Radiology	0,3	6	2	4								
	Pharmacology	0,3	6	2	4								
	Histology	0,2	5	1		4							
	Morphology	0,1	2		2								
	Physiology	0,1	4		4								
	Pathology	0,4	11	3	8								
	Pathophysiology	0,7	16	6	8	2							
	Paediatrics	0,4	8	4	4								
	Ear, nose, throat	1,4	38	6	16		16	0,1	4		4		

	Lessons	Block training						Clinical skill training					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
BLOCK 11. KIDNEYS AND HOMEOSTASIS	**The kidneys and Homeostasis**	**5**	**131**	**43**	**76**	**4**	**117**	**1**	**26**	**6**	**20**	**0**	**22**
	Morphology	0,3	6	2	4								
	Laboratory	0,3	6	2	4								
	Physiology	0,5	12	4	4	4							
	Pathophysiology	0,4	11	3	8								
	Pathology	0,3	6	2	4								
	Paediatric disease	0,3	6	2	4								
	Pharmacology	0,3	6	2	4								
	Nephrology	2,3	52	20	32			1,0	26	6	20		
	Urology	1,0	26	6	12		8						

	Lessons	Block training						Clinical skill training					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
BLOCK 12. BLOOD, ONCOLOGY AND GENE EVOLUTION	**The blood, oncology and the gene evolution**	**6**	**146**	**42**	**74**	**14**	**158**	**1,5**	**40**	**8**	**32**	**0**	**32**
	Haematology	2,4	58	18	40			0,8	20	4	16		
	Laboratory	0,3	4	4				0,1	4		4		
	Oncology	1,5	40	8	12	4	16	0,3	6	2	4		
	Pharmacology	0,1	4		2	2		0,0	0				
	Paediatrics	0,0	0					0,4	10	2	8		
	Genetics	0,8	18	6	8	4		0,0	0				
	Pathology	0,3	6	2	4			0,0	0				
	Immunology	0,4	10	2	4	4		0,0	0				
	Radiology	0,3	6	2	4			0,0	0				

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 13. NERVOUS SYS-TEM	**The Nervous system**	**7**	**177**	**47**	**76**	**16**	**197**	**1,5**	**40**	**8**	**32**	**0**	**32**
	Histology	0,2	5	1		4							
	Neurology	4,6	118	30	48	8	32	1,4	36	8	28		
	Rehabilitation	0,7	18	4	4	4	6						
	Radiology	0,1	2	2				0,1	4		4		
	Morphology	0,6	16	4	12								
	Physiology	0,4	8	4	4								
	Pathology	0,3	6	2	4								
	Genetics	0,0	0										
	Pharmacology	0,1	4		4								
	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 14. MENTAL HEALTH	**The mental health care**	**6**	**150**	**42**	**64**	**12**	**170**	**0,9**	**20**	**8**	**12**		**23,2**
	Mental health	4,3	108	28	40	8	32	0,9	20	8	12		
	General practice	0,9	24	4	20								
	Genetics	0,3	6	2		4							
	Pharmacology	0,4	8	4	4								
	Physiology	0,3	4	4									

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
Block 15. RE-PRODUCTIVE HEALTH	**The reproductive health**	**7,1**	**177**	**49**	**92**	**20**	**179,8**	**1,4**	**36**	**8**	**28**		**31,2**
	Histology	0,4	10	2		8		0,0	0				
	Obstetrics and gynaecology	3,2	77	25	48	4		0,8	21	5	16		
	Pharmacology	0,3	4	4				0,0	0				
	Urology	0,8	21	5	4	4	8	0,2	5	1	4		
	Microbiology	0,6	16	4	8	4		0,0	0				
	Paediatric disease	0,8	20	4	16			0,2	5	1	4		
	Sexually transmitted disease	1,1	29	5	16		8	0,2	5	1	4		
BLOCK 16. CHILDREN-ELDERS	**Lessons**	**Block training**						**Clinical skill training**					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
	Children-elders	**5**	**140**	**28**	**92**	**12**	**108**	**0,8**	**20**	**4**	**16**		**18,4**
	Reproductive health	0,5	14	2	12								
	Mental health	0,9	22	6	16								
	General practice	1,1	32	4	24	4							
	Paediatric surgery	0,8	28	4	12	4	8						
	Paediatrics	1,8	44	12	28	4		0,8	20	4	16		

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 17. NUTRITION AND METABOLISM	**Nutrition and Metabolism**	**8**	**193**	**51**	**132**	**10**	**191**	**2**	**54**	**10**	**44**		**42**
	Morphology	0,1	4		4								
	Emergency care	0,3	7	3	4								
	Laboratory	0,4	10	2	8								
	Physiology	0,1	4		4								
	Pathophysiology	0,4	10	4	4	2							
	Pathology	0,4	11	3	8								
	Oncology	0,3	6	2	4								
	Radiology	0,1	2	2				0,1	4		4		
	Pharmacology	0,3	7	3	4								
	Gastroenterology	3,0	78	18	56	4		1,4	38	6	32		
	Surgery	1,3	33	9	24			0,5		4	8		
	Paediatric disease	0,4	11	3	8								
	Histology	0,4	10	2	4	4							

	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 18. THE LOCOMOTOR AND SKELETAL SYSTEM	**The locomotor and skeletal system**	**5**	**161**	**29**	**84**	**12**	**115**	**1,5**	**40**	**8**	**32**		**32**
	Traumatology	2,0	82	14	28	8	32	0,8	20	4	16		
	Morphology	0,6	18	2	16								
	Rheumatology	1,3	33	9	20	4							
	Rehabilitation	0,5	18	2	12		4	0,0	0				
	Surgery	0,4	10	2	8			0,8	20	4	16		
	Lessons	Block training						Clinical skill training					
		Credit	Contact Hours	Lecture	Practice	Seminar	Self study	Credit	Hours	Lecture	Practice	Seminar	Self study
BLOCK 19. SENSORY SYSTEM AND DERMATOLOGY	**Sensory system and dermatology**	**9**	**240**	**48**	**102**	**18**	**264**	**1,9**	**50**	**10**	**36**	**4**	**41,2**
	Physiology	0,3	6	2		4							
	Ear nose throat	1,8	60	12	28	4	16	0,3	6	2	4		
	Dermatology	2,3	88	16	36	4	32	0,8	20	4	16		
	Sexually transmitted disease	0,0	8				8	0,4	10	2	4	4	
	Surgery - I	0,0	0					0,1	4		4		
	Ophthalmology	2,1	68	16	32	4	16	0,4	10	2	8		
	Pharmacology	0,1	4		2	2							
	Cosmetology	0,3	6	2	4								

BLOCK 20. RESEARCH METHODOLOGY	**Lessons**	**Block training**						**Clinical skill training**					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
	Research methodology	**5**	**96**	**40**	**20**	**20**	**176**	**0,6**	**16**	**4**	**12**	**0**	**12,8**
	Epidemiology	2,4	56	20	4	16	16	0,6	16	4	12		
	Biostastistics	2,4	40	20	16	4	16						
BLOCK 21. SOCIAL AND OCCUPATIONAL MEDICINE	**Lessons**	**Block training**						**Clinical skill training**					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
	Social and occupational medicine	**6**	**163**	**53**	**82**	**12**	**141**	**0**	**0**	**0**	**0**	**0**	**0**
	Preventive medicine	3,7	82	36	42	4							
	Forensic medicine	1,3	44	8	16	4	16						
	Emergency care	0,8	23	3	16	4							
	General practice	0,6	14	6	8								
COURSE 6 /Clerkship/	**Lessons**	**Clerkship training**						**Clinical skill training**					
		Credit	**Contact Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**	**Credit**	**Hours**	**Lecture**	**Practice**	**Seminar**	**Self study**
	Clerkship	**27,9**	**1232**	**272**	**288**	**352**	**137,2**						**0**

Contact hours total	6048,0
Self study total	5039,6
Self study total	590,8
Total	11678,4

GB modules, Elective, Summer practice, Line, Block training Credit	217,2
Clinical skill training credit	26,1
Total credit	243,3