



**David Tvildiani Medical University**

**Self-Assessment Report**

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## A About the Accreditation Procedure

### General Data

<b>Website of the Medical School</b>	<a href="http://www.dtmu.ge/">http://www.dtmu.ge/</a>
<b>Faculty/Department offering the Degree Programme</b>	“AIETI” Medical School
<b>Name of the degree programme (in original language)</b>	დიპლომირებული მედიკოსის საგანმანათლებლო პროგრამა
<b>(Official) English translation of the name</b>	MD programme

## B Characteristics of the Degree Programme

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF <sup>1</sup>	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
MD programme	MD Degree	Medicine	Level 7	Full time	N/A	12x Semester	360 ECTS	Autumn/Spring Semester 1992/1993 Academic Year – Autumn Semester

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<sup>1</sup> EQF = The European Qualifications Framework for lifelong learning

## C Self-Assessment

### 1. Mission and Outcomes

#### Criterion 1.1 Statements of purpose and outcome

The mission of David Tvildiani Medical University (DTMU) is - providing higher education based on science and the best international experience in medicine (<http://www.dtmu.ge/index.php?Cat=1&sub=2&lang=1>).

The aim of the program is to organize content/volume of academic courses, as well as teaching and learning in a way that facilitates: reaching modern knowledge in basic medical and clinical sciences; obtaining clinical skills for corresponding stage (I stage of medical teaching) of teaching; growing ethical values important for profession; readiness for continuous learning and development during future professional practice. Close relation (mission/aims) with research and academic standards provides possibility (“correspondence with goals”) of program development (Appendix #1).

The aims of the program correspond to the mission and is reachable by the principles by which the university is directed, which is very important. Considering country healthcare needs and based on international standards of medical education the university adopted corresponding learning outcomes of MD program for its graduates. Learning outcomes presented in mentioned program describes with field and general competencies what the graduates have to know, must be able to do and what kind of values they have to have after graduation of the program what also is expressed in the program goal and aims (considering format volume). The program also describes employment fields of the graduates.

In the field of medical teaching orientation on employment market means orientation on quality – in the framework of MD program, first of all, quality means possibility of enrollment into residency program including abroad what is very important during globalization era either for graduates or long-term perspective of the country. Abovementioned is considered in program goals (in the framework of format), as it is focused mainly on the quality and development of teaching, learning and research, etc.

Mission announcement describes program goals (graduates – “with necessary fundamental knowledge and acknowledgement, skills and values required for medical practice”), what is provided by educational strategies making program basis and teaching/learning methods used in program.

MD program education strategy is a delivery of spiral curriculum through organ systems approach, problem based learning and outcome-based education using components obligatory by curriculum and chosen by the students.

During the last decade according to mission announcement and program goals and learning outcomes, the program underwent significant evolution in medical simulations, PBL and Case-based teaching/study by implementation of new methodologies as well as development of scientific component. For the development of students scientific skills new teaching formats were implemented and piloted. There is a possibility of more choice for students interests and future career development in the program. Innovative approaches implemented in teaching/learning and assessment increase university reputation at national and international level; give to its graduate possibility of more choice for further study and employment. Thus, the mission of the institution, goals and aims of the MD program are shared by the university academic society members (staff, students) and implemented in everyday practice of the university.

### **Criterion 1.2 Participation in the formulation of mission and outcomes**

Learning outcomes represented in DTMU MD program with field and general competencies describe what the graduates have to know, must be able to do and what kind of values they have to have after graduation of the program what also is expressed in the program goal and aims (considering format volume). Previous year studies by quality assurance department showed that there is formal correspondence of DTMU education program, goals, learning outcomes to the requirements of either national or European field documents. The program satisfies enrolment requirements of the USA, England and other residency and post diploma programs. High index of employment of graduates also confirms high competitiveness of the university graduates (Appendix #2). Corresponding interested persons were enrolled in the process of further development of mentioned goals and learning outcomes of the program.

Mentioned enrolment meant various groups, discussion and analysis, different formats, methods and measures of participation and recommendations.

The program including learning outcomes planned for graduates are discussed in the framework of TEMPUS project on workshops of project partner organizations, colleagues, the members of project working groups, also are discussed at the meeting of medical specialists association (Report of Project).

DTMU has developed a questionnaire for interested persons (for academic staff, graduates, students and employers) on field-specific competencies required for MD program graduates and also evaluating general competencies, which allows to study the opinion of interviewees in the framework of competencies valuable for the field and in the framework of the university academic program about importance of obtaining these skills/competencies (Appendix #3.1/2, 4.1/2, 5.1/2).

The first survey of systematization of behaviors and characteristics associated with the concept of professionalism was conducted; it was meant to research the doctors' opinion of the practitioner and request the target audience to assess the characteristics of professionalism (85 items); the types of professional conduct and obligations and the responsibilities of the situational tasks; as well as professional development, behavioral experiences, reaction to medical errors, etc. Research on their experience in matters. The survey continues due to the need for an increase in the number of respondents, but at this stage, it is possible to deem necessary elaboration a strategy for the development of professional identity and to continue research (Appendix #6).

One of the most important is to consider the requirements/wishes of employers as one of the most important aspects of a program's development. It is also believed that this improves the learning process and increases its adequacy to the labour market (appendix #3.1/2). All research data of the labour market research by an authoritative state agency shows that "there are significant challenges in the medical staff ("2011-2015 State Strategy for Health Care of Georgia ". Chapter 3.3"). It is recognized that there is an increasing demand for high quality candidates, learning outcomes of which are also recognized among other countries (Appendix #7). Thus, quality assurance service pays special attention to the analysis of requirements of employers. Has questionnaires, conducts interviews, analysis the results (ref. QA self-assessment report of 2012-2013), interpretation of analysis of mentioned results and especially implementation needs quite careful and well-judged activity due to some conditions: "difference" of employers, quite limited employment market in Georgia,

orientation on income of great part of health sector in the framework of reforms implemented during recent years and other reasons. More about this issue is discussed in criterion 2.8.

### **Criterion 1.3 Institutional autonomy and academic freedom**

It is important to note that prior to the formulation of the University's mission, the university and its medical education program was created (in the first years since independence of Georgia) as an alternative of unified program in medical education (Appendix #8); this was a kind of "application "Autonomy" and "Independence" and that a group of academic community had its own idea about the medical field and medical education, what the student and his professor and the entire Georgian community were doing. Currently as a follower of Bologna principles, DTMU is an Associate Member of the European University Association; The fundamental principles of the Great Charter of Universities are part of its charter (University Legal Form Ltd.); accordingly, "realization of students and academic personnel based on science and international experience" is not only relevant to the main objectives of Georgia and Europe but also formally guaranteed by the University's founder (Appendix #9) and its academic society activity implemented in practice.

"Contribution to creation of education based society" is the most important guiding principle for the university. Universities (including DTMU) need "autonomy" and "independence" in any country; however, this is not a goal, but only a way to create a knowledge based society that will guarantee their "autonomy" and "independence" and provide creation of new knowledge for the service of the society. Which is evidenced by the quality of graduates, students, teachers and involvement of the academic staff and civil society groups at the national / international level in the groups of academic, professional and citizen societies, from the date of the university creation.

Approval, changes and cancelling the programs are conducted according to legislation applicable to the University. Assurance of the quality of programs is provided by relevant processes and procedures: Planning/approval of program initiation and/or changes; evaluation and development of educational programs. Various parties are involved in this process such as members of the University academic community (teachers and students),

various structures, special target groups, Medical Education Centre, members of the administration and other bodies (appendix #10).

Existence of such rules and procedures in the university formally confirms necessity of collaboration in the process of educational programs planning, processing and development (Appendix#10); the same is confirmed by the practice existing at the university; QA group is always involved in the process of planning, implementation, evaluation of the product (program, new course, new educational resource, method, etc.). This group always evaluates mentions at all levels and expresses in self-assessment reports.

The university has a methodology for planning, developing and developing educational programs based on the Tuning Project Curriculum Planning, Implementation and Transmission Model ("Tuning Quality Development Cycle") and describes the Guiding Principles; furthermore, it explains the issues of program profile description, determination of program goals and descriptions of the expected learning outcomes with knowledge, general and subject-specific components; formation and description of academic content (topics) and structure (modules and credits); determining the types of educational entities and activities intended for achieving the agreed results; establishing the methods for achieving results and assessment. The methodology also discusses two equally important issues for the modernization of the curriculum: What does modernization mean and how will curriculums change accordingly (Appendix#11).

Curriculum Committee and Medical Education Centre (MEC) of DTMU take care of possibilities for the development of MD program. MEC significantly facilitates the process; the objectives also are updating the curriculum and facilitation of new curriculum development; "providing collaboration" of interested thematic groups; facilitation of academic groups (on a scale of our university and other universities) interested in academic program development and/or changes, in creation and/or delivery of new educational resources, etc. which also is a part of DTMU policy relative to the issue, MEC delivers training course "modern medical curriculum", other courses, interested teachers, staff, student; which helps implementation and development of mentioned policy along with existing rules and experience in the university.

DTMU continually works at the development of programs; following instruments are used for assessment:

- Inquiry of main interested persons (student, teacher, employer, graduate)

- Analysis of students' academic achievement;
- Analysis of results of inquiry of persons enrolled in the program;
- Analysis of improvement of material-technical base;
- Analysis of integration of survey results in academic process

During reporting period in addition to the development of MD e-PBL program (Described in e-PBLnet Quality Control Report), revision of academic modules and courses of curriculum basic stage was conducted jointly by MEC and Curriculum Committee (Appendix #12).

The meetings had formulated agenda with facilitator (for promoting of questions and discussions), with secretary (for "fixation" of group opinions and requirements in the report and action plan), which created possibility of effective use of generally limited time (60-120 min) for workshops. The group was homogeneous in disciplinary terms, including students and administration members.

It was important and useful that the group had various status participants, e.g.: young and experienced teachers, dean, coordinator and the students.

The number of participants was enough (7-15) for accepting quite wide list of opinions and in the same time quite suitable for discussion which gave chance of speaking to everyone.

The workshops enabled us to make the right planning (semi-structured survey, the participation of students, teachers, and administration) and the proper organization of meetings (form, etc.) To achieve qualitative feedback on program design, learning and teaching quality issues. Part of decisions made already implemented, the work continues; planned to determine the corresponding format of revision and conduct it in clinical and practice (sixth year) courses of the curriculum.

It is important that the university has a "new partner" (EBMA-European Board of Medical Assessors), which has enabled her to assess its own program. University students (100 students) participated in a so-called online Progress-test (provided by Maastricht University), which apart from providing students' individual assessment, identifies the program's "problematic" areas. The pilot of the test has been conducted, "problematic" module work has begun. DTMU is the participant of this format (EBMA) and will continue to work in a permanent co-operation with him; Cooperation results will be used to improve the program.

In the development of the program, the University administration and academic community pay great attention to focusing on student research and professional skills competences. In this regard, the university used the initiatives of its own academic personnel, the possibilities of analysis of their own and international surveys, as well as international projects; namely students in the planning and implementation of their own research. (Project Actors Capacity Training in Caucasus)

The university strategic development and management group developed the document “university concept of research based learning” working at implementation of which is being continued (Appendix #13).

Research and program development (clinical skills) in field-specific and professional skills implies monitoring and evaluation of "Clinical Skills N5" (CS-Clinical Skills N5) implemented in the reporting period. The course was completed by 6 groups of DTMUMD Program students. Surveys were conducted among the 2014-2015 6th-year students (2 groups) and 2015-2016 academic year 6th-year students (4 groups). The query showed that students rate the program very highly; it also demonstrated that students expressed a desire to have this course available at the pre-clinical stage.

The Quality Assurance Department elaborated appropriate recommendations for the relevant structures. The course has been developed for preclinical stage modules. Currently this format is included into education from 3<sup>rd</sup> semester till 5<sup>th</sup> semester organ system diagnostics classes (6 module); the students study more complex cases and situations of patients at the beginning of clinical stage (6<sup>th</sup> semester); in 11<sup>th</sup> and 12<sup>th</sup> semesters the abovementioned is continued with more complex cases (Appendix #14, 15).

Starting in the first semester of the 2016-2017 academic year, PBL-tutors developed special forms for self-assessment by students in group work; the initial results of the research were very important for the rest of the academic staff in order to understand students' work in PBL format, including the importance of continued professional development of future physicians (self-assessment of their capabilities and progress); studies are important in the context of the new field document, which currently considers, the requirement for teaching and evaluation of professionalism in the undergraduate education programs (Appendix #16).

MEC, including for the university academic society members, is the place where “testing” of new education resources is conducted with the participation of them; possibilities of enrolment into the program are discussed in the purpose of analysis of usefulness for the

progress of the students enrolled into the program, for example: standardized patient (appendix #15) 3D anatomy atlas.

Thus, with the development and compliance of programs with the ever-changing environment, the University provides the best international practice and the results of its own research; which allows for the correct change and development of "correct targets"; it facilitates program implementation to meet the goals and activities of the target (workshops, promotion, training, and education, involvement of teachers, students and administration).

## 2. Educational Programme

### Criterion 2.1 Curriculum model and instructional methods

DTMU MD educational program is approved by Academic Council and is standard document accepted at the university. Mentioned document describes general structure of the program, program goals and learning outcomes (general and field competencies), program content, methods of teaching, learning and assessment. The document is accessible for either academic or other wide societies, also is placed on official web-site of the university (<http://www.dtmu.ge/index.php?Cat=2&sub=5&lang=1>).

The program, curriculum plan and syllabuses of the courses (modules) are determined and approved by the Curriculum Committee. Curriculum plan describes in details what courses, by which amount and sequence are delivered to the students. Syllabuses of courses describe module subject block and topics, tasks required from the students, format of learning and assessment, etc.

Curriculum plan and syllabuses are also accessible to students, explanation of the content of syllabuses are delivered by the teachers at the beginning of the course. Effective implementation of the curriculum plan is also facilitated by regulation of education process which describes the rule of enrolment and registration for the program (including electives and scientific project), regulation on tasks and examinations, information concerning teaching methods and format, disciplinary issues, etc.

Teaching, learning and assessment methods used in the program are relevant for reaching the set learning outcomes. Education methodology is based on integrated teaching and assessment around human organ systems. Except lectures, practical sessions and seminars training in medical simulations are used for development of students clinical skills: excersising safely for “patients”, trauma management, injections, basic life support akilla and manipulations. Methodology of teaching/learning is implemented in PBL format which increased focus on use of theoretic knowledge in practice, group work, clinical judgement and professionalism aspects. Mentioned approach decreased teacher-centered teaching and facilitated students-centered teaching and study of basic sciences.

This format of teaching and learning (as journal club delivered in scientific skills trainings) facilitates studetns in understanding of principles of evidence based medicine;

because it helps the students to ask questions, search for the best scientific evidence, critically (relative to case) evaluate it.

Teaching/learning “in small groups with technique of learning – interviewing skills”, also means introducing clinical cases and clinical problems in small groups, interviewing standardized patients, history taking, physical examination, preliminary diagnosis and development of the plan of patient’s further management. It is included in organ system diagnostics classes at basic stage of teaching (in 6<sup>th</sup> module); More complex cases and situations of patients are taught at the beginning of clinical stage of teaching which continues subsequently by more complex cases in Clinical Clerkship.

For the development of scientific skills new formats of teaching was piloted and implemented. There is possibility of more choice of students interests and future career development for further learning and employment.

Teaching and learning methods used in the curriculum are promoting and facilitating for readiness to lifelong learning. For example: the survey, planned and conducted in DTMU in the purpose of analysis of PBL format teaching, showed that during the work in PBL format (may be in other format of teaching as well) students “experience” (“length” of students involvement into the PBL program is meant) does not affect contribution of students in PBL, group adaptation and qualitative discussion, acknowledgement of preparation for PBL (for group work); which is important characteristic for professional practice of the physician. Professional associations worldwide consider self-reflexion, self-regulation and self-monitoring as the most important issue of physicians’ continuous professional development. Lifelong learning requires that individual to be able not only to work independently but also self-assessment of own possibilities and progress. Thus, expectations from undergraduate MD education are kind of “exercise” in self-assessment and obtaining skills of self-regulation conduct and self-monitoring in students teaching what is facilitated by teaching in PBL format according our survey data (results of the first study, it is being continued).

## **Criterion 2.2 Scientific method**

Research based learning in DTMU MD education programme delivered in two ways: mandatory for all students and optional track.

Mandatory – Scientific skills are developed through 5 academic courses with a total of 10 ECTS credit equivalent. Of these 10 ECTS credits the three Principles of Scientific Research

courses (1, 2, and 3) comprise 6 credits, while 4 remaining credits are fulfilled through the Biostatistics and Epidemiology courses. Students can also (optional track) complete a project writing course (2 ECTS credits) and in case a project is developed and submitted and approved by the Research Unit the student obtains additional 8 ECTS credits. In case the project is latter successfully implemented and a thesis is defended a student obtains an additional 10 ECTS credits, with a total of 30 credits in science.

The Principles of Scientific Research courses now are organized in the “Journal Club” format. During each seminar 2 speakers report a presentation about a given topic for 15 minutes, after which discussion are held. Speakers’ write summary and show it to others like a “handout”. The final summary is written at the end of discussion. Speakers reports in short according the following format: Introduction, formulation hypothesis, study design and logic of study process, discuss methods, detailed analysis of results using illustrations from the publication. Evaluate the adequacy of methods used to alternative explanations (confounding factors). So, the student’s understanding of the research process in clinical context facilitates the following:

1. Academic Courses of "Principles of Scientific Research".
2. “Basic Principles of Research Proposal Development” course.
3. Understanding of basic medical sciences in clinical context:
  - A) Teaching / Learning and Evaluation on Organ System based module.
  - B) Literature used for learning.
  - C) Formats used in training, with PBL and Case-based elements.
4. Specific structures for pre-diploma education students involved in the study.
5. Request for submission of scientific research results.

### **Criterion 2.3 Basic Biomedical Sciences**

Basic and biomedical sciences “The first from curriculum main topics”: is the most important component of “basic and clinical sciences”, in DTMU MD program they are integrated to each other and clinical sciences mainly around human organ systems.

On I year academic courses are organized in such a manner that (i) in most cases it supports better acknowledgement of subject block materials included in them, as well as (ii) except

general part of each discipline, material is studied which presents necessary basis for learning human organ systems on II year.

II year entirely and III year fall semester (III-V semester) are devoted to the study of human organ systems and academic courses programs of basic and clinical sciences are horizontally integrated to each other, is related to the study of diagnostics of internal disorders and pharmacology (vertical elements of teaching) and make 9 modules of organ systems;

At the level of basic and clinical sciences system study in the module starts with embryology, then macroscopic structure of its organs is discussed (anatomy), microscopic (histology) levels and conformity of normal functioning (physiology and biochemistry). Then etiology and pathogenesis (microbiology, pathology – path anatomy and pathophysiology), clinical assessment of pathologic processes, typical clinical picture of the disorder, diagnostics and communication with patient, principles of development of management plan and measures of medicamentous treatment (pharmacology) are studied in each system.

At this level of teaching (I-V semesters) “the share” of basic medical sciences is significant (about 118 credits of 150 credits); in the same time their integration in the module with diagnostics of internal disorders and clinical assessment of pathologic processes as of lectures and practical sessions, except delivering materials in PBL and CBL format, as well as journal club format, discussion of scientific achievements facilitates in-depth acknowledgment of modern knowledge in basic sciences and focusing on clinical significance of this knowledge. Also at the level of clinical medicine and during Clinical Clerkship some sessions discuss concepts of basic sciences and most of them focus on clinical use existing in basic sciences. At this level of curriculum (clinical medicine and Clinical Clerkship) the students have possibility to use this knowledge for wide list of average clinical situations in conditions of ambulatory and hospital practice.

#### **Criterion 2.4 Behavioural and social sciences and medical ethics**

A key element of 21st century medical education is preparing students to care for not only individual patients, but also for the entire population and society. Many medical students choose their profession due to the fact that they want to: Make a difference; Address society’s health needs; Help improve quality of life; Apply science to challenging problems; Pursue opportunities for leadership and many other reasons which directly are falling into the competences of a public health educated professional. Subjects that are taught in DTMU

and are within the broad field of population health include biomedical ethics (I year), public health and epidemiology (V year), preventive medicine (V year), behavioural sciences (II and III years), biostatistics (II year) and legal base of medical practice (II year). These subjects are administered by the Social and Behavioural Science department at the DTMU. Related educational content is also delivered through the PBL sessions or in the frameworks of such subjects as microbiology or pathology. These courses address key subjects within population health, with an emphasis on helping students to understand the systems and environment that influence health and health care delivery, realize their role across the core medical professional competencies.

This part of curriculum is one of the important parts of 2 topics of 4 ones of DTMU MD program (“Public and population health”, “Personal and professional development”). Topics of public and population health along the curriculum entire vertical is organized as follows according teaching stages: The students have possibility to discuss these topics at basic and clinical stages of teaching in PBL classes in patient-centred context. They have possibility to study the issues of public health and sociological issues influencing health. Important issues are also delivered in the format of lectures and seminars through discussion of cases at the stage of clinical medicine; an important content of behavioural science, social sciences and medical ethics also are delivered in the framework of psychiatry, obstetrics and gynecology, pediatrics, family medicine academic courses.

Seminars and forums of ethics with discussion and presentations on ethical issues of real situations belong to the topic of personal and professional development at the stage of basic and clinical sciences; Aspects of this topic are included in PBL scenarios. PBL sessions at this stage of teaching play an important role in the delivery of various aspects of personal development, practice via group dynamics and critical feedback. At the stage of clinical medicine and Clinical Clerkship the students have possibility of practice of these skills during communication with patients and colleagues.

### **Criterion 2.5 Clinical sciences and skills**

Clinical sciences, clinical and professional skills are distributed in 2 of 4 themes (conventionally) of DTMU MD program: basic and clinical sciences and clinical and communication skills (Appendix #1).

Teaching of clinical sciences are starting at the first stage of curriculum – basic and clinical sciences. Teaching of clinical sciences and training in clinical-professional skills at this stage start with “diagnostics of internal disorders with clinical assessment of pathologic processes” included in the module organized around human organ systems.

In the purpose of perfection of medical practice, timely diagnostics of patient’s situational clinical condition and obtaining methods of provision of rational treatment clinical academic courses (subjects) are taught gradually, for example: teaching of internal disorders is gradually deepened vertically from down to up: principles of clinical diagnosis with clinical assessment of pathologic processes (methods of diagnostics, II-III courses), special pathology (etiology, pathogenesis, clinics, diagnostics, prevention, principles of treatment of disorders) III–IV years, differential diagnosis and treatment – V year, syndromic differential diagnosis of disorders and urgent therapy – VI year.

Thus, in the framework of spiral curriculum system based (mainly) clinical topics started at basic stage are revised (3 times). At the stage of subsequent clinical medicine (VI-X semesters) and is consolidated at the course of clinical clerkship (XI-XII semesters).

The students discuss, study topics of health support and prevention medicine during the study of either specific disorders (including in the format of PBL, when exercising in clinical skills, for example: patient education, at standardized patient, lecture, seminar), as well as clinical rotations and practice. Except special course “prevention medicine and health support” these topics are devoted in the course of family medicine.

Materials delivered by lectures, seminars, PBL and CBL scenarios, as well as Journal Club belong to the topic; during the rotations (VI-X semesters) and specialization (XI-XII semesters) this topic is replied by multiple educational possibilities. The students have possibility to use knowledge obtained in conditions of ambulatory and hospital practice for wide list of clinical situations.

The part of clinical and communication skills of curriculum means development of clinical and communicative skills necessary for medical practice during entire period of teaching. It contains training in communication with patients and colleagues, history taking and clinical examination, in other main clinical skills including primary and basic life support, trauma management, different manipulations, etc.

At the stage of basic and clinical teaching the students have possibility to work in small groups in PBL and clinical skills classes (the course diagnostics of internal disorders with clinical assessment of pathologic processes), in the form of role-play and communication of standardized patient, clinical skills training courses; at the stage of clinical medicine the abovementioned is added perfection of clinical and communication skills by working at ambulatory/hospital patient bedside in conditions of wide list of disorders.

Thus, during entire period of delivery of MD program the students obtain enough knowledge and training in clinical sciences and skills (for MD program graduates); Particularly, class/laboratory/virtual teaching and learning format based on acknowledgement of issues and examples (valuable example of acknowledgement of clinical importance, identification and solving of medical problem, clinical case and scenario, etc.) associated with human health and pathologic conditions at I stage in “the course of theoretic (basic) medicine”; starting correct approach to discussion of clinical case, communication with patient and obtaining skills, including with simulated patients; there is included here access to clinical practice (courses of principles for diagnostics), training in clinical skills; starting obtaining scientific-research skills and discussion on ethical values the most important for medical professionalism.

II stage–Teaching/learning/assessment in “the course of clinical medicine” is conducted on clinical bases practically in the framework of all courses, where the goal of the program is discussion-acknowledgement of typical clinical pictures, as well as rare and/or diagnostics and management principles of atypical cases, issues of basic sciences conditioning them in clinical context and on the example of individual patient; despite clinical session it considers teaching and learning at patient’s bedside, supervision of individual patient (including possibility of observation on treatment and management results), understanding whole picture (management protocols, communication in clinic, communication with patients and his/her family members, ethical issues, problems and values, etc.) of clinical practice via communication with patients and other professionals (other physicians of the clinic, nurses, other members of the team); clinical rotations mean ambulatory and hospital patients, all ages (age-related specificities), main specialty fields in medical fields (the patient with neurologic, cardiologic, oncologic, surgical, etc. problems).

III – the Course of Clinical Clerkship is oriented to clinical practice: here formal theoretic classes are minimal and student’s medical knowledge (obtained on 1-5 years) is “tested” and developing by fitting to determination and solving individual patient’s needs. The student fulfils physician’s (licensed) tasks and/or acts for the patient (at patient bedside) under

supervision of teacher and/or department doctor, helps in doing manipulations, stays on duties, etc. In the course of Clinical Clerkship practice in internal medicine and surgery, obstetrics and gynecology, pediatrics, infectious disorders and neurology is necessary. Also as an elective course (and the possibility of choice realization for future career growth) has possibility to pass practice inside the country and/or abroad in university partner hospitals and clinical bases; strengthen clinical skills and develop scientific competencies; acknowledge practically legal aspects of health organization and management, medical practice. At this moment training in professional practice is delivered in the format of controlled self-study.

### **Criterion 2.6 Curriculum structure composition and duration**

The program is described by the standard form accepted at the university in which program goal, learning outcomes, length of academic year and amount of credits, general structure of the program, content, description and organization, strategy of teaching and learning, assessment strategy are expressed.

Every component of the DM program aims at achieving the goals and competencies provided by graduates. The competencies (in the context of the curriculum) are described through academic outcomes where observation and evaluation is possible. Teaching/learning forms as well as their evaluation methods are pertinent to the subject. 95% of the curriculum items are obligatory and serve to achieve the objectives and goals by ensuring relevant competencies. The program envisages electronic training courses in only 10 credits. Additionally, there is a connection between basic and special courses. In this regard, the choice of the course (1 month) in the 6th-year program can be considered as the strongest part of the program, enabling students to plan the course of study with the students in accordance with their wish / choice and pass the transparency of the choice of clinical training bases.

The 6-year period of teaching includes 3 stages: I - basic medical and clinical scientific course; II - clinical medical course; III - general specialization course. The program is an integrated learning course (at the basic level Horizontal integration with elements of vertical integration; such integration is reflected in the assessment system; there is a connection between the learning phases), which means that the course or discipline serves to strengthen the knowledge received by other courses and also reflects the diversity and depth of the courses; The levels of teaching are organized so that the basic course is the basis of

subsequent stage (the clinical medicine course), both of which are precursors to the general specialization course, and ultimately providing adequate knowledge, skills for the qualification of a diploma (defined by the national qualification framework and field documents).

In addition to the general part of the course I will study material that is the basis for studying human systems on II course; The basic course of basic medicine from the II course is horizontally integrated, linked to the study of the procedure of the pharmacology and the pharmacology of internal diseases (the element of vertical learning) and creates the system modules: The learning begins with embryology, the structure of the constituent organs at macroscopic and microscopic levels; normal functioning concepts, etiology and pathogenesis of the diagnostic system, clinical evaluation of pathological processes, clinical picture of the typical forms of diseases, diagnostics and medicines. Clinical courses are taught in stages, for example: The training for internal diseases is compounded vertically from below to above: propaedeutic (II–III y.), Private Pathology (III–IV y.), Differential Diagnostics of Internal Diseases, Treatment (V y.), Syndrome Differential Diagnostic and Urgent Therapy (VI y.). The program bases on cyclist around 9 modules of spiral curriculum. The cycle makes 3 spirals. I spiral is the stage of basic and clinical sciences; where explanation of mechanisms of clinical (meaning) assessment of norm and pathologic processes of system is delivered in human organ system based modules; principles of typical clinical picture, diagnostics of disorders, development of patient management plan, communication with him/her, etc. II spiral bases on the first one and is organized around abovementioned 9 modules at the stage of clinical medicine, presents so called transitional stage at first level between more directed teaching and 3<sup>rd</sup> level more self-directed teaching. At 2<sup>nd</sup> level deeper revision of 9 organ systems is conducted on real patients cases, with more focused on patients medical and social, health problems, properties of communication with them; spiral III is Clinical Clerkship, bases on student's previous experience (I, II spiral) in the purpose of its (knowledge, skills) consolidation and preparation for future clinical practice (residency program).

In each abovementioned module so called PBL and CBL are included in MD program which increases focusing of studied material (fundamental and clinical sciences) on clinical importance of the issue and usefulness for patient.

Degree to be awarded and qualification level of MD educational program corresponds to national qualification framework which is provided:

1. Educational program is one-stage, integrated. Not less than 360 credits (MD – 360 credits; most of the credits 30 hours: 16 hours with contact work); 2. The program (program content, including academic courses content and amount, organizational structure of the programs, forms and methods of teaching and learning) is directed to obtaining teaching field results determined for medical practice which corresponds to 2<sup>nd</sup> level of higher education; 3. Despite field results the program provides achieving general transfer skills at corresponding level (master's degree) which is expressed in the program in the objectives and results of each academic course and matrix of competencies.

According to the World Federation of Medical Education (WFME) standards, the competence of basic medical education for the countries participating in the Bologna Process shall be determined on the basis of the competencies provided by the Tuning Project, which is in line with the European Qualifications Framework. The relevant competencies for each field includes such components as:

- Knowledge and understanding of basic, clinical, behavioral and social sciences, including medical practice, such as public health and medical ethics;
- Clinical and other skills related to diagnosis, practical procedures, communications, treatment and prevention of diseases, health promotion and rehabilitation issues, clinical thinking, problem solving, etc.;
- The possibility for increasing life-long learning and professional qualifications development;
- Consequently, based on the country's health care requirements and the international standards of medical education, DTSU has defined the results of the relevant education program for its graduates;

The academic outcomes are characterized by sectoral and general competencies and describes what a student should know, what they should be able to do and what values DTSU graduates should possess post-graduation.

Compliance is ensured by:

- With respect to competences defined by a sectoral (medicine) document [also relevant to the World Federation of Medical Education (WFME) standards of study results: A) Program Training Courses (Topics), Field Knowledge and Field Skills (Level 1 / Primary) to achieve learning outcomes defined by a sectoral document competences) are relevant; B) in terms of teaching / learning and assessment the program is relevant to the characteristics of the main competences (second level competences) of the study results of the sectoral document.
- In the appendix of the document, the theoretical knowledge and training courses are

relevant and subjectively concurrent.

- The sector document envisages at least 2 stages of the integrated curriculum's 11-step scale: In this regard, the program is at a much higher level.
- The programmes include scientific skills course of 10 credits (required standard for all students; 30 credits – with student's choice).

### **Criterion 2.7 Programme management**

The Curriculum Committee of DTMU has an important function responsibility of which is planning and implementation of changes in the purpose of development of new program and/or perfection of the existing one. Initiation of new program and/or changes are possible for the member (members) of academic community, MEC, QA, other initiative groups, considering results of various studies conducted by the university (e.g.: studies of labour market, employers, students' opinion, etc.); including according planning new program, development and perfection of existing one, existing policy of DTMU (Appendix #11) and keeping the procedural rules of educational program development, approval, making changes and cancelling (Appendix #10). "Product received" according all these rules (course, program, implementation of study method, etc.) needs positive decision of Curriculum committee in the purpose of implementation and/or approval at Academic Council (new program) and/or informing (important changes). The committee implements and/or participates in the development/discussion and/or recommendations needed for structuring of academic process and management.

The chairman of the committee is – vice-rector in the field of education; its constant member is the dean of faculty; academic staff from departments, students representatives, from different structures (QA, MEC, Committee of strategic management, library) are presented in the committee. Committee members are appointed by the decision of Rector's council for 3 years. Members from students – for 1 year.

The committee gathers twice in semester according the plan; when necessary extra meetings are appointed.

For evaluation of the curriculum, its changes, new courses, etc. effectiveness it listens to corresponding report, including the analysis of study results (e.g.: after the piloting of the course, in the purpose of approval of planned changes, etc.).

### **Criterion 2.8 Linkage with medical practise and the health sector**

It is noteworthy that there is acknowledgment of importance of this issue at the university, moreover, QA studies of previous years showed formal correspondence of DTMU academic program, its courses, final results to the requirements of national, as well as European field document. The program satisfies requirements of enrolment into Georgian and other countries residency and post diploma programs. High index of graduate's employment also confirms high competitiveness of the university graduates (Appendix #2).

In the same time, situation existing in medical practice and service development and changes need constant attention from the side of medical education providers. DTMU works at program development including in different formats of collaboration with external interested persons (Georgian Association of Medical Specialists, Georgian International Medical and Public Health Association); with practicing physicians and employers.

Participation of the university in the framework of the TEMPUS (currently ERASMUS+) project (e-PBL-net) financed by the Euro Union since 2012 made possible to implement problem based learning (PBL), which was an important step for either program or its academic staff professional development. This approach decreased teacher-centred teaching of basic sciences and facilitated student-centred teaching and research. Increased the level of program integration and focus on clinical skills, using the knowledge in practice, group work, clinical judgement and aspect of professionalism. Determined obligatory list of clinical presentations implemented around organ systems organized in academic modules also enhances patient-centredness of the program (Basic stage); facilitates focusing on either students study or program integration. Characteristics for enrolment them (clinical presentations) into the program are frequency (spread) and importance (e.g.: life-threatening conditions) in the purpose of either individual or public health.

Analysis of mentioned needs was done, including on the basis of analysis of employers' enquiry, where they stressed need of focusing on such skills of the graduates as study, constant update of knowledge, using the knowledge in practice, identification of problem, problem setting and solving skills. According this, at that level PBL was the most corresponding educational resource for the development of the student's above-mentioned skills (Appendix #3.1/2)

Family medicine course was implemented in DTMU (including for focusing to such choice from the side of graduates) to respond the needs of strengthening of preventive focus in existing medical services in Georgia ([www.moh.gov.ge](http://www.moh.gov.ge)).

QA service has implemented working plan on collaboration with employers which considers constant communication relative to the issues such as: competencies of DTMU graduates, joint care on card development (e.g.: observer ship). Etc.

### 3. Assessment of Students

#### Criterion 3.1 Assessment methods

DTMU has published principles and methods of students' assessment determined for study in academic program (Appendix #1). The document concerning MD academic program describes (explains) assessment goals, key principles of assessment, assessment goals in curriculum topics, general criteria of assessment in curriculum topics according teaching stages. As well as assessment methods used by academic staff in the framework of the program. For the assessment of knowledge and skills various methods and form of assessment, particularly multiple choice questions (MCQ), mini-cases, questions for problem analysis, objectively structured clinical exam (OSCE); clinical cases - Mini-CEXs (communication with standardized and/or real patient), direct observation on procedural skills, case-based discussions (CBD), oral presentations or posters, critical evaluation of magazine article, interpretation of scientific research, patient data, use of medicine electronic formulary. Corresponding assessment form is determined for each academic course. Assessment methods, as well as criteria for passing the course are delivered in module syllabuses according each subject blocks (also is described in regulations of academic process) and also are explained by the teachers.

Scores (and corresponding marks) proving student's academic progress must be awarded in the end of semester in all academic courses and modules of the semester. Scores (marks) awarded once do not change anymore except the case of finding technical mistake; also, when there is re-examination of failed oral or written exam and in mentioned exam(s) the student obtains positive assessment; as well as during repeated study in the semester when he/she repeats the whole semester program module, academic course and obtains corresponding assessments and credits which is expressed in Diploma attachment. Scores (marks) awarded to the student (MD) who finished an academic course satisfactorily, working in the course and module is following:

a) Five types of positive assessment:

a.a) (A) excellent - 91% and more of maximal assessment;

a.b) (B) very good - 81-90% of maximal assessment;

a.c) (C) good - 71-80% of maximal assessment;

a.d) (D) satisfactory - 61-70% of maximal assessment;

a.e) (E) enough - 51-60% of maximal assessment;

When the student obtains negative assessment credits are not considered passed and it means following assessments:

b) Two types of negative assessment:

b.a) (FX) could not pass - 41-50% of maximal assessment, which means that the student has to work much more for passing and is awarded with one more chance to take additional examination.

b.b) (F) failed - 40% and less of of maximal assessment, which means that the work conducted by the student is not enough and he/she has to take the subject/module again.

- “is not allowed” to take semester final exam means that the student’s progress during the course was not enough, had missed hours (and the course needs to be recovered) or did not perform tasks, or “did not present” at oral exam or both. In other words, all pre-quiz (pre-final semester exam) requirements have to be satisfied at minimal level to allow the student to take the exam. During the semester unsatisfactory study due to missed hours (that he/she did not recover, recovery during the semester was not possible) will be fixed as F.

The coordinator of the first year must present to assistant dean the list of the first year students who are under negative assessment in module in 3 weeks (I module) from the beginning of study, 4 weeks (II module), 3 weeks (since starting the 3<sup>rd</sup> module). The copy is delivered to the dean. The coordinator and the assistant dean (if necessary the Dean) initiate discussion (identification of weak and strong sides) of each student’s achievement in order to suggest some facilitation.

Student has possibility to appeal against the exam (written, oral) results and discussion is done through commission method (of oral or written work: taset). The student has right to re-exam any failed subject once during the semester (according the schedule of examinations and re-examinations), repeating the semester is possible only through taking two additional semesters in order to preclude underperformance (Appendix #17). The mechanism of correspondence of awarded scores by various examiners in examination (oral) is the practice

of mutual agreement of the teachers on examination questions, forms and formats, their mutual attendance on sessions and examination (Appendix #18).

Validity and reliability of assessment methods (objectiveness method, such as e.g. MCQ or reliability and validity of psychometric assessment other form of complex assessment) are documented and checked: with quantitative and qualitative approaches. Functioning of tests' individual questions are checked; Complexity of examination questions, homogeneity and heterogeneity.

### **Criterion 3.2 Relation between assessment and learning**

At the first stage of MD program of DTMU in “the course of basic and clinical sciences” progress in obtaining knowledge and clinical skills by the student is continually assessed (current and final assessments; assessment in oral and written formats, group activity and communication skills, discussion and making decision, skills of analysis and synthesis, etc.) (ref. MD programs, “learning outcomes,” also syllabi); thus the student receives assessment according to the semester and feedback from teachers on the progress in medical knowledge and clinical skills, including recommendations needed for progress; which is also a precondition for allowing the student to take an exam (summative stage examination in basic medicine), after which he/she continues study at subsequent level of the program.

Assessment of the progress in student's knowledge and professional skills development is conducted in the field of all main medical specialties (Appendix #1), that is expressed in current and final assessments, which is conducted in oral and written formats, by analysis of portfolio, assessment at patient's bedside either in medical knowledge or professional and practical skills; thus allowing to the summative stage examination in clinical medicine and “satisfactory” assessment in knowledge and skill is precondition of allowance to the 3<sup>rd</sup> stage.

At this level training in professional practice is delivered in the format of controlled self-study;

General criteria for the assessment in each 4 topics (“Basic and clinical science”, “clinical and communication skills”, “public and population health” and “personal and professional development”) of curriculum is discussed in the document describing MD program and also, descriptors for each stage of teaching are given.

Formative assessment (pre-quiz score) of subject blocks in the module is maximum 60% of final assessment and presents sum of scores of its separate components. Formative assessment

in the module of basic and clinical sciences, formative assessment in the module of clinical sciences with assessment format and ratio (percentile), also forms of final assessments in the module and ratio (percentile) is expressed in academic program and syllabuses.

Thus, assessment methods are adequate for learning outcomes. In whole assessment system means:

1. Existence of combined system (current and summative) of assessment;
2. Different methods of assessment are used: written (MCQ), oral, assessment of activity in PBL, Mini CEXs based exam, assessment at “patient’s bedside”, portfolio, assessment of reference paper/scientific works;
3. Assessments and examinations cover course content and program (topics and modules) in whole amount;
4. There is possibility of summative assessment of all academic topics/study components either in current or the system to be studied (in written and oral form);
5. Assessment corresponding to teaching stages: revealing the students who are allowed (according the reached stage) to next stage of teaching or who needs to repeat the program;
6. In the assessment of the student teachers, PBL tutors, program directors, examination center, external expert (6<sup>th</sup> year summative exam) are involved;
7. Assessments and examinations cover program goals/objectives entirely.

Balance is corresponding between formative and summative assessments to make decisions concerning study and academic progress (by the preference of formative ones). Student can get such feedback on study everyday: in everyday practical class (practical sessions, Mini-CEX, etc.), when working in PBL format weekly, in each module subject block (oral exam), and during discussion of module summative exam and discussion of results (by student’s will), through stage exam results, simulation, after communication with standardized and/or real patient, analysis of portfolio.

For all students (group) additional exam is held in the after the end of the semester; reexamination of it is possible in the end of semester; between the exam and re-exam 10 days (not less than) interval is kept for corresponding preparation.

## 4. Students

### Criterion 4.1 Admission policy and selection

The regulation for mobility, acquisition, suspension and termination of student status approved by the Rector Board is in place at DTMU. Additionally, there is procedure regulating the learning process, which also defines the procedure for enrolling Georgian and foreign citizens in DTMU, the rules of mobility and registration of students, awarding qualifications, students' rights and obligations, or terminations and suspensions for graduates, as well as means for incentives (Appendix #17 #19).

In accordance to Georgian legislation, Georgian and foreign students, can obtain status of student through passing National Unified Exams or without them (see later). Those Georgian citizens, who last 2 years completed general/secondary education (or equivalent to it) abroad and foreign citizens, who have completed the last two years of their secondary education in a foreign country can join DTMU without passing unified national examination, in accordance with Georgian legislation. Procedures for communication with applicants who wish to join DTMU and for admission rules, are all in accordance with university regulations, developed in full compliance with Georgian legislation. Obligatory subject for admission are one of the following: Biology, chemistry, physics, mathematics, appropriate level of English language is mandatory for entrants. In case when applicant is required to pass national exams, exam procedures of aforementioned subjects are through passing Unified National Exams, tested by the National Assessment and Examination Center. The right to enroll other applicants is issued by the Special Administrative Act of the Minister of Education and Science of Georgia, Order #224/n 2011 year. December 29.

The Dean (or assistant Dean) assesses the candidate's achievements in general education (and / or equivalent), knowledge of English language, as well as, a number of other subjects for the possibility of enrollment in DTMU (education abroad) and gives to applicant recommendation for possibility of enrollment in DTMU Medical Doctor program and defines individualized learning plan and any additional study supporting activities that may be required.

After all the necessary procedures (Recognition of education by the National Center for educational Quality Enhancement, issuing of a visa by an appropriate consular office, payment of the tuition fee) applicants are registered at DTMU as an active student.

Based on specific characteristics of educational program and taking into account the time needed for procedures, which are not influenced by university, it is decided whether the candidate joins the study process during the first or second semester of academic year.

The mobility process in DTMU is in accordance with Georgian legislation, which includes the vacant places for mobility and public statement from the university on readiness for enrollment of a student. The procedure also includes the revision of the information provided by the applicants. By reviewing the information provided by the applicants and comparing appropriateness of educational programs, the university determines the appropriate semester in which applicant will be enrolled. Additionally, evaluating academic performance and motivation of the student (through interview) university determines the possibility of continuing and/or beginning of the studies (from the first semester). Applicant is provided with appropriate decision until the completion of the registration procedure. In case of approval on mobility, the applicant will pass the standard procedures for enrollment to DTMU: Signing the contract, registering, agreement to individual liabilities, etc.

Each applicant at DTMU should pass through the registration, in order to gain an active student status, this is done by providing mandatory documentation and undergoing appropriate procedures (Appendix #20), afterwards student is given an identification number and data are entered in National Center for Educational Quality Enhancement general register and a student ID is issued.

There is linkage between student selection process, and university mission and program goals, together with desired quality of graduates. This linkage is also achieved through profile subjects needed for admission.

University periodically reviews admission requirements and procedure. Yearly defines and sends to National Examination Center priorities for profile subjects and demanded level of knowledge of subjects and/or changes the above mentioned aspects. Last modification was made (in 2018) for students contingent of 2019/2020 academic year.

Change was based on analyzing the result of university research conducted during the last 2 years (Appendix #21).

In Georgian universities, there is no system of appeal for admission decision. Admission is decided by NAEC and/or Ministry of Education (in case of foreign students) and based on students' choices of educational institution.

## **Criterion 4.2 Student intake**

According to Georgian legislation, authorization procedure and decision defines the number of students' contingent threshold for the university. In frames of these decisions, university is analyzing resources for concrete program and based on it defines the number of students possible for admission. The last revision of students' number was in 2016 for MD program admission contingent, based on these principles. DTMU document for planning students' contingent is defining rules of methodology, describes university approaches related to contingent planning mechanisms, taking into consideration specificities of educational program. Students' contingent planning document also defines appropriateness to target values of above mentioned aspects. Students' contingent calculation formula is defined (Appendix #22).

## **Criterion 4.3 Student counselling and support**

The practice of providing assistance services planning of their own learning process and improvement of academic achievements has been established, since the foundation of „AIETI“ Medical School.

Currently, the process has evolved and become more formalized, in particular, students' assistance from academic staff (which is always recognized as an organic and inseparable part of academic activity) is included in calculation of pedagogical workload: students' consultations within the group up to 20% of independent work, pre-exam (oral) consultations 2 hours per group; consultations before professional skills progress certification, 2 hours per group; before the qualification exam, 2 hours per group; individual consultation for students - up to 10% of students' independent work; surveillance/supervision of students' independent work, including with purpose of students' counseling up to 20% of independent work. As well as counseling on preparation of abstracts and research projects (Appendix #18).

Medical School structures, within the scope of their authority, are ready to assist and support students. In particular, the Dean's office, including reacting and support to students' individual needs (delivering information and decisions), preparing documentation for students' personal history, for the recommendation purposes (financial aid, career development, characterizing students, continuous study etc.). Facilitation and support of visas and insurance related issues to foreign students, communication with students' on any issue (related to the educational process and / or personal problems), supporting and

promoting students' engagement into activities related to program or not, as individual learning-academic activities, individual training in clinical (mainly) and other formats of learning, supporting in choosing elective courses and / or other. Taking care of graduates' career growth, providing appropriate / necessary Documents, Sign Paper, Transcript of diploma, Recommendation-Confirmation, etc.

All members of dean's office are involved in supporting students. The most frequent and close communication with whom students are have is course coordinator, who is usually "the first" students are approaching to. The coordinator is providing student assistance/counseling under his/her authority or refer to the dean or Dean's office other members. In the field of science, students are assisted and supported by Vice dean, as well as, Scientific-research Department. They are providing individual counseling services to the PhD students and the Students of faculty of Medicine; in particular:

- Elaborating of grant application
- To develop a research protocol
- Elaborating of research data recruitment tools
- Implementation of study data statistical analysis
- Preparation and publication of scientific article
- Searching and processing scientific literature
- Assessment of scientific work to eliminate plagiarism
- Facilitate participation of staff, doctoral and medical faculty students participation in scientific conferences

Students can apply to the Dean's office and get appropriate individual or group assistance in frame of additional trainings to eliminate academic backwardness, and/or relevant consultations to facilitate preparation for the Residency Examination (Appendix #19).

Also, this kind of assistance is provided to students by DTMU graduates who are currently working abroad.

The University has an "Peer-to-peer Support Center", which exists for many years. Support model is that senior students are assisting freshmen in learning process of basic medical sciences. Remembering the facts "how hard" and "what was" so hard for them and how to deal with it. Currently this format is expanded: The university has created a student and young scientists scientific association, which organizes conferences and also helps students to prepare and present scientific abstracts related to basic medical sciences.

The University realizes that the issue of supporting a student's career development is much more complex than providing them with information about job vacancies only (also important) and/or facilitating communication with the employer, involve them in the professional associations of the mainstream sector which is also important, of course, but not enough. As far as the physician's career choices occur in most cases in the medical school, it should have an impact not only on interest (example of emotional factor) and/or income (a rational approach to surgery at first glance), but also a lot of other factors, professional and lifestyle expectations, as well as some aspects, goals, the desired workplace (geographical, large / small town, etc.), in the context of "goals", "expectations" and "desires". The right approach to helping in the career choice in the medical field must necessarily mean a joint (adviser-student) focus on the matter. Consequently, the Career Development Center (Appendix #23), was created, which envisages in its work, ships and conducts individual work with students in the above-mentioned context.

The university foresees the student's social-economic condition and has developed flexible system for lessening payment system. Student is given opportunity to pay the tuition fee modularly (usually 3 times in a semester) or individually (in certain cases) according to the determined plan. During the last two years, the privilege of paying the deductible fee for the MD student, also in the PhD studies. University provides financial support to facilitate students' academic progress and faith, engagement in extracurricular and social activities. In particular:

(I) Scholarship: David Tvildiani Scholarship for students from second to sixth year. A transparent and objective rule of appointment and issuance of a monthly scholarship shall be made by the Joint Competition Commission (procedures, deadlines, presenting documents in appropriate order) (Appendix #24; 25).

(II) Rector's Scholarship (will be awarded to the Best Graduate)

(III) benefits for excellent students (deduction from tuition fee) (Appendix #19):

- 25% of the tuition fees for the next year;
- 50% of the tuition fees for the next year;
- 100% of the next year's tuition fees;

(IV) Financing of US Medical Certificate Exams (USMLE);

(V) Granting status of the best student of the year (Appendix #24);

(VI) Acknowledgement for various activities in the personal case (Appendix #24)

(VII) Exclusive Scholarships for the students of David Tvildiani Medical University by partner organizations and clinics (Appendix # 64).

#### **Criterion 4.4 Student representation**

DTMU have defined and established rule and practice for students' participation in curriculum planning, management and evaluation processes. Students are participating in all existed committees, as well as working groups of different formats, where it can be relevant and reasonable. Students are members of following groups: rector's council, curriculum committee, faculty committee, quality assessment's self-assessment group and disciplinary committee. University tries to support students' representation at any working group (including newly developed for special purposes), where issues of academic practice, program evaluation and development, students support and other relevant issues for them are discussed. At university, there is effectively working students' self-governing unit – Students' and Young Scientists Scientific Association (SYSSA). SYSSA activities are expressing their support in ensuring preparedness/development and raising quality and effectiveness of highly-qualified medical professions. Associations working is transparent and information about their activities, plans and projects are accessible to all students' and interested persons. SYSSA representative is involved in committee meeting related to scientific and academic issues, where they can propose initiatives and/or make a decision (in frames of competencies).

The University tries to encourage interested students to participate in professional and students' activities. DTMU Students' participation is already a tradition for:

- Antwerp University Summer School in Vaccines (Belgium) Participate annually (since 2014)
- Annual Symposium of Molecular Biology, Cologne (Germany) since in 2016
- As well as participation in a number of international student and professional conferences
- For 10 years, the students of DTMU (70 students were involved in the program during the last six years) have been involved in exchange program in The Klaipeda

University Hospital within various fields of medicine (chosen by choice, future career choices).

- DTMU Alumni relations department in collaboration with university graduates who works in USA, implemented a special project – 20 sixth-year students to practice in different clinic of USA
- Based on a signed agreement, in the German city of Mainz, DTMU students have the opportunity to participate in practices at the center for metabolism and hormones.
- The University also supports the possibility of Additional internship programs by students on the basis of a one-time training agreement at clinics in Europe, the USA and/or India.

The university supports university students professionalism level growth/increase with their involvement in students' professional organizations (including financial support DTMU students cooperation with Georgian:

- International Medical and Public Health Association (GIMPHA) and engagement in the activities.
- European MD/PhD Association membership and active participation.
- Facilitation of university students with meetings and workshops of International Federation of Medical Students' Associations (IFMSA) [including the support of its "subsidiary" Georgian Medical Students Association (GMSA) in Georgia).
- Participation in American Surgeons Association Clinical Congress (American College of Surgeons)
- It is noteworthy that most students use these opportunities to share experiences with other peers. Such student initiative, which is also fully supported by the University, is the foundation of the Basic surgical skill interest group (SIGA) by DTMU students in which enrolled 45 students. There was developed Peer-course for those students who plan to choose career In the surgery field/ as surgeons and in specialized courses. 4 student-tutors and 3 student-tutor assistants were trained to conduct trainings; the results of the student survey showed that the group's training (i) is of interest and beneficial for students; (Ii) Course is useful for student career choices and growth; (iii) The financial and administrative promotion of the work of this group should be gained by the University. Recommendations were also developed for the improvement of the course.
- In this field of medicine (surgery), student cooperation and assistance is particularly noteworthy: Quality Assessment Group has conducted a survey of senior students, where students who has already formulated/decided his/her career choice point to the

choice of "specializing in surgeon", which is yet another confirmation that this form of students' interaction with the university will need more support in the future (Appendix #27). The above mentioned extra-curricular format is not the only one, in university there is established Gynecology Interest Group (GIGA), Neurology Interest Group (SIGN).

A good tradition of cooperation has been formed between students and the university's public relations and marketing department. This structure of the university promotes students involvement in events planned by the department, as well as implementing students' initiatives (sports, arts, cognition, etc.). Organizing joint tours, social activities and involvement in sports events.

## **5. Academic Staff/Faculty**

### **Criterion 5.1 Recruitment and selection policy**

David Tvildiani Medical University has developed and implemented the rule for recruitment and selection of the academic staff. The rule is in full compliance with Georgian Law "On Higher Education". The process of selection and appointment of the staff at academic positions is performed in accordance with requirements of Georgian legislation, Statute of the University, Internal Regulatory Documents etc. through open and public completion, based on transparency, equality and fair competition principles. The rule describes academic positions of the university, accordingly their obligations (according to position), conditions and dates/duration of appointment (according to position), criteria for evaluation of applicants (Appendix #28; 29). Prior to the opening of the call the draft nomenclature/list of the university academic staff is developed (is presented by Vice Rector in Educational Affairs), the staff positions are defined by departments and directions (*Basic Medical Sciences: Directions of Department of the Human Morphology and Anatomy, Directions of the Department of the Cellular and Molecular Basis of Normal and Pathologic Processes in Human, Directions of the Department of Surgery, Directions of Department of Internal Medicine, Directions of the Department of Social and Behavioural Sciences*) to ensure adequate delivery of the curriculum. The document also defines the rule for establishment and operation of Competition Committee.

In addition to elected academic staff university has invited teachers as well. The documentation provided by candidate invited teachers is evaluated by Educational Department of the University together and in agreement with heads of the course(s), where involvement of invited teacher is expected. Educational Department (in case of positive conclusion) presents the candidate to the Rector`s Council. Accordingly considering positive conclusion the Employment Contract is signed, in which rights and obligation of parties is regulated by Georgian legislation, University statutes and internal provision. The rule considers teaching, research and clinical experience, competency and merits of the staff in the relevant field, as well as involvement in professional and social areas – this is relevant to the university mission and social responsibility to prepare young competitive professionals.

It should be mentioned that qualifications and competencies of the academic staff is satisfactory to the university. Also it is in compliance with requirement defined by Georgian legislation on recruitment of the staff and on higher education. The curriculum in whole, its teaching courses/directions is fully staffed by academic staff; the number, qualifications and competencies of the academic staff complies with requirement defined by University and Georgian legislation.. The students evaluate teaching staff positively that is confirmed by performed survey.

The number of elected academic staff for delivery of the main educational components is 70, including 19 professors, 39 associated and 10 assistant professors, 2 assistants. The number of invited teachers is 143.

Prediction of the demand for the Academic staff and according planning, defining of the levels of specialties and qualifications is performed by Educational Department; criteria and requirements for the selection of the academic staff is defined by Academic Council; the competition is held by competent competition commission (approved by rector`s council) and transcript of the decision is presented to the Rector`s Council.

## **Criterion 5.2 Staff activity and development policy**

There is formulated and established rule for staff activity and development (Appendix 18). The document reflects the norms of calculation and use of workload of professors and teachers in DTMU: Norms for teaching and non-teaching activities, teaching workload

norms for reimbursement for additional (hourly) work, which will also be important for quality assurance service for future analyses of teacher and students` ratio calculation, and for rightful planning of future development.

Document describes what is the teacher`s work (what it should be) for the economy and for the public, how can be measured subjective-creative component of teachers, which enables possibility for analysis and research and what are the legitimate arguments for defining teachers workload norms

The document defines classification of the working norms. Also, describes the types of work of the teachers, specifies them and is useful for calculating volume of teaching activities and its specific characteristics, as well as to Educational Department and for planning, reporting and controlling teaching schedules and individual learning plans.

Teachers' annual working period is considered to be the academic year, including winter and summer holidays, which do not coincide with the planned vacation. The total working-time budget allocated for all types of pedagogic activities is defined by 1500 hours in a year. In case of illness, business trip, or other reasonable circumstances, the teaching workload is implemented by another teacher (or invited teacher) by hourly payment. After returning at work, before completion of the academic year, it is necessary to adjust the individual pedagogical work plan.

The academic workload of higher education level educational programs in DTMU is differentiated for the staff, based on professors` and teachers` positions, as no more than 900 hours (no less than 200 hours) during the academic year. The following academic workload is established DTMU academic staff:

- Professor 650h (non-classroom teaching) – 300h (classroom activities);
- Associate Professor: 750h (non-classroom teaching) – 400h (classroom activities);
- Assistant Professor 850h (non-classroom teaching) - 500 (classroom activities);
- Assistant: 350h (non-classroom teaching) - 220 (classroom activities);

Specific volume of the workload is defined by teacher's individual plan according to their positions (duties), as provided by the employment contract, including individual, scientific research and other educational activities with students. These activities are defined in employment obligations and (or) individual plan, which includes – methodical, preparatory, organizational, diagnostic, monitoring, and other types of activities performed with students. Also working with PhD students, Residents, within Continuous Professional Education (Appendix 18).

In certain cases, academic workload of particular teacher could be defined by Vice Rector in Educational Affairs by the proposal of the academic council of the university (faculty), below the minimal requirement for those academic staff members, who are (or will be) performing additional organizational-methodological activities.

Teaching activities consider contact work of teacher with student (also resident, PhD student), including using electronic and distance educational technologies.

Contact work can be classroom-based and non-classroom-based. The contact classroom-based work is based on its traditional forms: Lectures, Practical Sessions, Seminars, Laboratory Work, etc., as well as eLearning using Distance Education Technologies. According to the internal regulation of DTMU, their use may be with or without replacement of classroom work. While replacing contact hours of classroom work, contact hours are included within the workload of the teacher. When electronic and distance learning technologies are used to organize and control students independent work under supervision of the teacher, teaching workload is planned as “Control of the Independent Work”.

All types of activities and time norms of academic activities are defined: classroom teaching, consultations, control, practice, supervising, preparation of scientific-pedagogic staff, in frames of Continues Medical Education (CME) preparation of attendants and other teaching activities.

The types and norms of educational/methodical, scientific-research and organizational / methodical work have been defined, which implies lecturing, preparation for other teaching activities, organizational-methodical work for scientific-research work as well as clinical activities (for clinical disciplines teachers), which can be calculated as annual teacher workload of teacher.

In the course of planning individual workload of teachers it is possible to increase the teaching workload by more than 1.5 full time rate in agreement with Vice Rector in Educational Affairs, but not exceeding 300 hours of the annual workload.

**Invited Teacher** – The teacher is invited to participate in practical classes, other teaching and/or scientific-research process and/or to run these process through agreement with the head of the Course and Educational Department, formal contract is signed. The workload of Invited Teacher is defined by the workload scheme renewable each semester: from 50 hours - to 1000 hours - based on the course hours provided by the program.

Thus, at DTMU there is a reduced working hours of academic staff, no more than 36 hours per week. The pedagogical workload consists of teaching workload (conditionally the first half of the day) and also educational-methodological and other work (conditionally the second half of the working day), which is adequate to the functions assigned to them by university (and by society as well), as they have the opportunity to perform activities oriented towards students' benefits and other professional activities. At DTMU human resource management planning and implementation, mainly means and is based on supporting staff development.

Hours of professional development (approx. 90 – 100h/year) for selected teachers is required and registered by expended time. Teaching-methodological work is calculated and registered in Educational Department. For control, evidence of internships, qualification raising certificates, lecture attendance notes and other possible evidences could be used.

For pedagogical development, DTMU Medical Education Centre is preparing and providing teachers' with courses/trainings for development in medical education.

## 6. Educational Resources

### Criterion 6.1 Physical facilities

For educational purpose DTMU (as of February 2018) possesses 2 areas (1 of them is owned, for the second one it has a right of utilization) and for non-educational purposes [(student dormitory) area (owned) which is equipped for 369 students] (Appendix #30). The property is registered in the data base of National Agency of Public Registry of Ministry of Justice and has cadastral codes assigned to it. In the prepared measured sketches are prepared educational and auxiliary areas are separated (Appendix #31). In the last couple of years, to improve educational areas, auditoriums and halls were renovated and were fixed up with respective technologies, necessary furniture and inventory (Appendix#31; 32). In respect to student number, the current number of auditoriums is sufficient. The university also has partnership agreement with clinical, scientific research and other institutes for the purpose of student teaching, research and professional development (Appendix#33), which is proved by Authorization Decision/Report #65 (10.09.2018): “LLC David Tvildiani Medical University (c/c 211360203) for the duration of 6 years be assigned the status of highest education establishment (university) and the number of student spots be 1000”. There is an approved project for building a new hospital (Appendix #34).

The auditoriums at Didube study base are also equipped with appropriate inventory including a waiting area / hall, library with reading room, simulation room, teacher’s room, auxiliary space, bathrooms, and dining area. Study auditoriums have natural and artificial lighting, a system for continues delivery of electricity. Bathrooms are adapted for individuals with special requirement. The base is also equipped with central heating system and air conditioning.

Surveys taken by the students regarding material resources are satisfactory (Appendix#35).

DTMU Daphne Hare Medical Library has the following: book storage, reading hall, IT space, group working space, and work area for the library personal. The library has appropriate inventory. The current practice was described in “Mechanism of development and renewal of library resources” (Appendix #36) and planned possibilities of development in the action plan (Appendix #37).

Therefore, the library has the necessary and respective resources for the academic development of students, teachers, and personal from affiliated establishments.

In the last years, library electronic bases (IMF e Library) have expanded; library's electronic catalogue, electronic bases can be found on the university's web page.

At the Didube study base library resources are also available for students and for teachers along with reading hall equipped with necessary inventory.

Quality Assurance also did a student survey (Appendix #38.1/2), the purpose of which was to assess the library by the students and establish those weak points, which remain problematic and require improvement. Based on the analysis of the results, the following strong and weak points were found:

At present time, David Tvildiani Medical University is monitoring and assessing available technologies (personal computers, laptops, printers, projectors). Based on the identified necessities, old technologies are substituted with newly purchased ones. University exam center is equipped with 61 personal computers that are allocated for electronic testing of students.

Department of information technology periodically posts and administers information and resources on the university's web and internet portals regarding storage of DTMU data and information, protection, and uninterrupted access and exchange. For this it uses the following elements: 3 physical servers, 7 virtual servers, network router and Firewall, 6 network commutator, 6 virtual networks, and 9 Wi-Fi equipment.

The university has a well-organized internal network (represented by the following: Router > Firewall> SCM Switch. University's local internal network covers all the territories and includes all the auditoriums and administration rooms. Also, the mentioned internal network is divided into 6 virtual independent parts which respectively serve:

(1) internal local network; (2) internal wireless network (Wi-Fi); (3) physical server; (4) network equipment; (5) computer devices integrated in the exam process; (6) management – virtual network, with the help of which the above mentioned 5 virtual networks are managed.

One of the physical servers in DTMU is divided into 7 virtual servers and on another physical server has Ori C accounting set up in terminal mode, through which simultaneously 5 staff members can use the accounting program. Out of 7 virtual servers 2 serve User Management and its politics, third virtual server serves web page whose address is: <http://openlabyrinth.dtmu.ge/>, fourth virtual server is for backup of staff information, fifth internal server is for antivirus, sixth regulates functioning of USB, CD, DVD devices on

personalized computers, which protects virus attacks from external devices, seventh virtual server allows connection of internal network with external network, this virtual network is one of the important means for security, since it protects internal network from attacks by external malware.

DTMU uses physical Firewall, which protects local network from external malware.

Safety of personnel and students is ensured. There is a functioning fire suppression system.

## **Criterion 6.2 Clinical training resources**

To fulfil the clinical portion of the educational program, DTMU has an agreements of partnership with leading clinics of the country and with international partners of the university (Appendix #33).

II (clinical medicine course) and III stages (clinical clerkship) of program of teaching/learning/assessment in all years occurs in clinics. There they have access to patients of various age groups (children, young adult, adult, elderly) and obtain knowledge to manage urgent cases and chronic patients, which they have in their wide medical specialization list (considered in the MD program). Contracts with the clinical facilities are available, where invited and selected teachers work. The characteristics of the clinical facilities, their specialization, amount of patient beds, and etc. ensures and is respective of the established number of students.

The teaching environment in the clinical settings is assessed through DREEM questionnaire and the possibility of its improvement and etc. is assessed by different questionnaires available for clinical skills assessments (Appendix #39).

At this stage, professional practical training is provided in the format of controlled self-learning; application of student's respective knowledge in practice and progress of their professional skills are also assessed by analysing their work (portfolio/Log-book analysis), communication with patients and colleagues; for admittance to the final (graduating) exam the assessment must be positive.

Qualification exam occurs in the following disciplines: internal medicine, surgery, obstetrics-gynecology, pediatrics, infectious diseases, and neurology.

Surveying in field-specific and professional skills and program development encompasses monitoring and assessment of clinical skills course (CS – Clinical Skills N5) implemented during the report period. The course was taken by 6 groups in Medical Doctor Programme. Survey was done in 2 groups of the 6<sup>th</sup> year of 2014-2015 study year and in 4 groups of 6<sup>th</sup> year in 2015-2016 study year. The results of the survey showed that students give the course a high assessment and ask for it to be incorporated in earlier (preclinical) stages of education. Quality department determined relevant recommendations for respective structures. A course for pre-clinical modules was created, a pilot version started in the III semester; student survey on the new course showed positive results (Appendix #14).

In the last couple of years, a survey is done on “where” and “what level” MD program students gain valuable professional skills; based on the results MD revision target group is established. Meetings were held between the academic personnel of basic medical program, administration, and students (Appendix #1; 12);

### **Criterion 6.3 Information technology**

For support and for strengthening the academic courses, David Tvildiani Medical University is increasingly focusing on further utilizing the capabilities of information technology. The University has a well-organized information technology infrastructure, such as equipment (computer, projector, etc.) and also communication equipment (internal network, Wi-Fi, etc.). DTMU protect local network from external malware by utilization Firewall.

Through DTMU server, proper functioning of information resources is possible, such as Openlabyrinth3 (electronic platform, by which students are provided access to cases involving virtual patients and in the format of problem-based learning modelling and discussion of patient management and clinical reasoning processes).

Also, the University in its study process is actively utilizing interactive electronic patient simulation, the so-called Body Interactive cases.

The University has its internal electronic platform (LMS.AIETI.GE), through which semesters, groups, and students are managed and grades are written in electronic journals. In the above-mentioned data base, students' attendance, activity and oral exam marks are registered. Electronic base can calculate pre-quiz score so it can be determined if the student is allowed to attend the last quiz of the module.

The University also has a student portal (<http://db.dtmu.ge>) – by utilizing it students are aware of their assessments - attendance, activity and oral exam marks, quiz score; also, the mentioned portal is used for communicating with students.

Student is able to see only his/her marks in detail in the assessment of a subject in a module.

The University also has the following electronic resources for academic work (teaching, learning, assessment):

<http://www.anatomy.tv> – the University obtained a license for ANATOMY.TV. The mentioned electronic resource allows the user to get to know and explore in detail in 3D human anatomy. Apart from learning pages, the mentioned resource also provides testing function. The resource is freely accessible from the University's territory (upon purchase outside IP addresses out of DTMU was noted). Also, if a student or a lecturer wants access to the resource outside of university's territory, it's possible with the username and password.

<http://moodle.dtmu.ge> – The University has implemented Moodle platform with automatic renewal activated on the server. It means that Moodle's official updates automatically become registered on our system's server. Currently we use Moodle 3.4.1+ version.

The University has a special program to carry out quizzes, which was ordered to be created in 2015 with a tight collaboration with an IT programmer so it could maximally meet the requirements of DTMU (Appendix #40). The program contains all the exam topics. In the Quiz Room, internal network is isolated from all other virtual networks, it is connected to a server that can be accessed by only 2 personnel from educational department responsible for. The results of the students' quiz or exam are stored in the above-mentioned server and the data are processed by the educational department. Calculated data are registered in lms.aieti.ge data base.

The following documents and information are available:

The politics and procedures of information technologies, information technologies infrastructure (Appendix #41); Agreement with Internet provider (Appendix #42); Information regarding electronic services and management of electronic systems (Appendix #43); Domains and the identification of hosting rights of hosting (Appendix #44, #45); Service agreement regarding the development of exam program (Appendix #46).

## **Criterion 6.4 Medical research and scholarship**

David Tvildiani Medical University is a university with specific profile, while the staff has a defined research interest direction (“biomedical research”); the “biomedical research” itself is applicable to a wide range of research and medical knowledge based activities. The University’s professors research interests are directed to a range of problems, using a range of methodologies. (Appendix #47; 48).

The wide range of research directions in the discipline of medicine can be integrated and the DTMU general research interest is formulated as: Structural and functional basis of norm and pathology, factors determining disease management and professionalization of the higher medical education; the Biomedical and Healthcare Sciences Doctoral Programme is relative to this interest, and research is conducted in the following directions:

- Normal and pathological processes: structural, molecular, biologic and functional basis, which itself is separated into two subdirections:
  - Modern use and future perspectives of biomarkers.
  - Human organism molecular and cellular response to pathologic processes.
- Factors defining etiology, clinics and treatment, also prevention, screening and epidemiology of diseases.
- Leadership in Medical Education.

All of them in some way serves disease prevention or patient care/management improvement. Accordingly the benefit of research process is obvious both for local and international society even though the aims and objectives of research, while interpretation of the research results is reflected in the practical use recommendations (Appendix #49; 50).

The University also has experience in cooperation with the scientific society members (Appendix #33); this supports the idea that cooperation must continue for research grant gaining; in not-for profit, social service applied research and experimental activity project formats wherever possible.

The University has an opportunity (as per the newly signed agreements) of research collaboration with new international partners. The University has a vision of long-term development in research direction, which considers both the research project development (research interest teams, international collaboration) and performance, and production of

research personnel, as well as active involvement in the international organization frameworks (ORPHEUS, EUA, etc.) in order to support the development of doctoral programme; continuation of long-term contribution to the Georgian scientific-research critical mass formation, also, very important, introduction of research skills training in the undergraduate and graduate education (residency programme). In this frame, the University has developed a research based learning (RBL) concept (Appendix #13), and works are ongoing in this direction. The University staff's research analysis, as well as the RBL concept are in full compliance with the University mission.

„Science“ and “Best International Practice” base are the integral and main components of the mission; is in accordance to Georgian and European aims of higher education; the mission, and related principles supports the realization of Georgian state constitutional responsibilities: - „the state ensures the national education system harmonization with the international educational environment”. The harmonization considers “constant compliance of research and education to the changing needs, society demands and development of scientific knowledge”; mission focuses “realization of opportunities for students and staff” and “support to formation of optimal environment for study and research” are also reflected; also both (autonomy, independence) are not possible without serving the interests of mission, constant quality enhancement.

Work to enhance academic writing skills, as well as the awareness on academic integrity is done both in graduate and doctoral education. Such topics as “scientific language”; “research writing styles”; “writing of research work and its types”; “research as an intellectual property”; “copyright and plagiarism”; “research ethics” and other relevant topics (described in details below and also in the criterion 2.2).

The University acquired the institution license for the „Turnitin” antiplagiarism software, instructions for teacher/instructor as well as students were developed; a special plagiarism related guide was produced for the students. Process implementation is started, the information on these instructions are delivered during all courses of pedagogical development by the Medical Education Centre; teachers and students can also obtain the skills individually; the University is involved in the Erasmus + financed project (ACADEMIC INTEGRITY FOR QUALITY TEACHING AND LEARNING IN HIGHER EDUCATION INSTITUTIONS IN GEORGIA / INTEGRITY) activities, with the main aim of academic integrity support to Georgian universities.

In order to support research component the following course was developed and integrated both in the MD and doctoral programmes: „Successful Project Development“, developed in

the frameworks of the Tempus project “Project Actors Capacity Training in Caucasus“ . The following education resources were published for this course:

- “Project Writing and Design” (in English and Georgian)
- „A guide – Research proposal made easy”
- “PACT project’s interactive online platform usage and administration guide”

The course currently considers 4 parts: principles of scientific research 1 – revised, delivered in “journal club” format; principles of scientific research 2 – revised, delivered in “journal club format”; principles of scientific research 3 – focused on research ethics and was modified in the antiplagiarism system technical use domain; 4 – research project writing, developed in the frameworks of the PACT project (syllabi).

Additionally, in order to make “Journal Club” format classes more engaging, time and management effective, the following guides were developed: “Journal Club Presentation and Discussion” and “Conclusion (One Page) Example of Article Critical Review”; also a tutor preparation syllabus was developed: „Conducting a Scientific Seminar in Journal Club Format” (Appendix #51).

The revised educational courses and produced guides/education resources were positively evaluated by the curriculum committee and quality assurance service;

A central research laboratory was installed in the University in order to support the process and periodically use it in educational programmes, this is an outcome of the strategic plan. Specifically:

- Improve educational programmes and quality of their integration;
- Develop research environment by gaining material and human resources;
- Support academic staff professional development;
- Develop cooperation in national and international level;
- Support student involvement in university life, with their direct contribution and active participation (student self-government, SYSSA, student interest groups SIGA, GIGA, etc.);

This is in compliance with the general research interest of the University, as well as the research directions (see above); supports the MD programme delivery:

- ✓ Through involvement in scientific skills courses

- ✓ Through the delivery of laboratory-methodological knowledge and training for the research project implementation.
- ✓ By integration of research based knowledge and experience in the educatory courses and modules, as well as delivery of separate (elective) courses.

The University has a system of support to research development and innovation; which considers creation of new knowledge, vision and approaches on research problem (including for future research) as well as new research idea formation support (Appendix #52). The above mentioned can be systematized in the following way: (i) support by according service, including individually; (ii) knowledge delivery in relative format; (iii) researcher and student delegation (according to their interests) to international forums for active or passive participation and obtaining new interesting collaboration opportunities; also to various laboratories (training). (iv) programme requirements; (v) organization of annual scientific conferences.

Additionally to medical skills in the undergraduate education, we consider the following to be supporting (except of the above mentioned): requirement of understanding of basic medical science topics in clinical context, supported by:

- organ system oriented teaching/learning and evaluation.
- literature used for the education process.
- teaching formats, PBL and case-based elements.

(v) The University founded a new format of DTMU conference, Improvement of Standards in Education, two have been held; the University also continues support to student founded conferences (SYSSA: “Atudent and Young Scientist Scientific Association”) and involvement of foreign participants in it (Appendix #53).

### **Criterion 6.5 Educational expertise**

In order to enhance and develop professional and teaching skills and experience, university is providing financial support to PhD and Undergraduate students, as well as professors for attendance at various medical education conferences and scientific forums (including AMEE, AMSE). “HEI (its academic staff) should be able to know new/modern approaches in teaching and learning”: in the framework of TEMPUS project and by support of project

partners, as well as considering DTMU strategic plan (is reflected in almost all strategic goals, as well as in strategies and targets for their achievement) DTMU established Medical Education Centre, which supports present and new staff of the university towards being aware and implementation of new approaches and technologies for teaching and learning.

Medical Education Centre is established (in the framework of the project ePBLnet #530519-TEMPUS-1-2012-1-UK-TEMPUS-JPCR) to support integration of Georgia to the Common European Area of Higher Education, also development of high-quality education system and its maintenance through continuously developing and updating processes, to implement and support research studies in the field of medical education. Medical Education Centre has organized and delivered internal courses and trainings (*PBL Tutoring, Journal Club Tutoring, Case Writing etc.*) for the academic staff development. University supports its staff development (*psychometrics, assessment in medical education, item writing, clinical skills teaching etc.*) through their participation in various international trainings and courses (EBMA, UEMS NASCE etc.)

Evaluation of DTMU academic staff by now is mainly based on students' evaluations, for which DREEM (Dundee Ready Education Environment Measure) questionnaire is used for years and main part of which is evaluation of teachers by students. This is internationally recognized tool in Medical Education for measurement of educational environment. Our experience (measures taken based on students evaluations) showed that in particular aspects students' evaluations have been improved (compared to the results from 2009-2010 academic year). Recent study showed that DREEM score of overall evaluation of teacher is 35/44, which corresponds to "ideal teacher". Though number of "unsolved issues" still remains: e.g. "teachers are authoritarian", "skill of adequate feedback", "skill of constructive criticism of students". Nevertheless, the part of teachers' evaluation (if we compare results of 2009/2010 and 2017/2018 academic years) is obviously showing improvement during pas years (Appendix #39)

Moreover, evaluation of teachers is performed continuously during new academic year and/or during changes of educational course format, including surveys targeting program development and improvement (*results of students' surveys*) (Appendix #14; 15). In context of pedagogical development, it is important to participate in calls for international grants, and participate in research and developmental projects to deepen university involvement in international educational collaborations.

DTMU has successfully implemented following projects:

- ✓ ePBLnet: 530519-TEMPUS-1-2012-1-UK-TEMPUS-JPC „Establishment of the Supra-Regional Network of the National Centres in Medical Education, focused on PBL and Virtual Patients“
- ✓ PACT: 544047-TEMPUS-1-2013-1-GE-TEMPUS-JPGR "Project Actor Capacity Training in Caucasus"
- ✓ #G-2094 “Elaboration of a universal test on magneto sensitivity”

At the moment the following ongoing projects are running

- ✓ “Academic Integrity for Quality Teaching and Learning in Higher Education Institutions in Georgia” (Coordinator: Ilia State University)
- ✓ “Raising Research Capacity of Georgian HEIs through Developing R&D Units” (Coordinator: Iv. Javakhishvili Tbilisi State University)
- ✓ ”Doctors’ Education, Empowerment of Patients, Regarding Atrial Fibrillation and venous Thromboembolism” (Call Pfizer-RFP-2018CV2)

David Tvildiani Medical University is individual associated member of European University Association (EUA), Member of an International Association for Medical Education (AMEE) and European Board of Medical Assessors (EBMA). DTMU is member (with representation in Executive Committees) of two European Organizations: Association of Medical Schools in Europe (AMSE) and Organization for PhD education in biomedicine and health sciences in the European system (ORPHEUS).

DTMU participates in all of the above mentioned formats, including for developing expertise of its own staff in the field of medical education.

## **Criterion 6.6 Educational exchanges**

The University promotes international cooperation. Even the foundation of DTMU was based on the idea of need for the internationalization of education generally and especially in the field of medicine. Originally the institution was established as "AIETI" Medical School and was founded for specialization abroad, later was renamed as DTMU. University’s curriculum was different (integrated modular) and was requiring to study with modern English textbooks. Naturally, from the very

beginning, Georgian and English was defined as study language, which enabled graduates to compete in postgraduate education and residency programs. The demand for the English language was also critical in terms of professional context, to involve Georgian staff (students and doctors) into international professional community (internationalization), what was reflected in the mission and strategic development plans of the University and became the practice of the University (Appendix #54). Nowadays, the university has foreign students as well, and its organic part is international dialogue, collaboration and supporting internationalization process. For development, university is involved in following international collaborations: AMEE, AMSE, EBMA, ORPHEUS, UEMS, EUA, which is reflected in strategic and action plans. (See Strategic Plan Fifth Target). University participates in International Projects (PACT; ePBLnet, INTEGRITY, HERD). Acquired experience is implemented locally and shared at a national and international level. Facilitates student training and research for the purposes of their international mobility (see criteria 4.4) and sharing their experience among peers. University is supporting teachers' development, their mobility and for sharing experience inviting foreign experts to Georgia (EBMA, ORPHEUS, and WFME). With financial support for membership fees, university is providing involvement of students' and young doctors to international professional associations (IFMSA / GMSA, UEMS/GAMS). Supports international contacts with the purpose of inviting foreign consultant and / or opponent to facilitate doctoral readiness and research. Cooperates with DTMU graduates in Europe and the United States, as well as to facilitate the future career growth of university students (including the possibility of specialized abroad) with GIMPHA. The academic community of the University agrees to the internationalization policy for the purposes of assessment and further development of the University (Appendix #55).

During clinical clerkship course, students' are often using external mobility opportunities. University has implemented guideline for acknowledging education received through external/abroad courses (Appendix #56).

In cooperation with the Georgian Medical Student's Association, the University students have opportunity to participate in the International Federation of Medical Students' Associations (IFMSA) exchange programs. Five students have participated in the program (undertraining 1 month clinical rotations in the following countries: Poland, Germany, Greece, Hungary and Serbia) the 2018-2019 IFMSA exchange season. DTMU did not only

send outgoing students, but also welcome respective number of incomings from the exchange countries. The number of students to participate in the program is expected to rise, in the 2019-2020 season (contracts signed for exchange with students from Finland, Hungary, Turkey, Greece, Germany and the Czech Republic).

## 7. Programme Evaluation

### Criterion 7.1 Mechanisms for programme monitoring and evaluation

Considering educational mission of the university the programs and their delivery is one of the most important targets for the quality evaluation and development. Accordingly defining the aspects of quality of teaching and learning of the program (to guarantee compliance with standards), which require attention, monitoring and evaluation remains as the main target for DTMU quality assurance.

Important issues for the quality assurance means are the information required for the strategic planning, particular actions for the problem identification and their communication to the academic community, performing quality evaluation processes based on PDCA cycle. The following are considered as the aspects for the program evaluation:

- Requirements of employers;
- Expected learning outcomes;
- Program description;
- Content of program curriculum;
- Program organization;
- Teaching/learning strategy, didactic concept;
- Students` assessment system;
- Quality of the academic staff;
- Quality of supporting staff;
- Students` support and consultancy;
- Infrastructure and environment;
- Students evaluations (surveys);
- Curriculum design and evaluation;
- Activities of staff development;
- Achievements of the graduates.

Curriculum development through systematic and justified ways is the key element for ensuring program quality. Main elements for internal quality evaluation of its continuous development are:

- Defining program aims and learning outcomes; specifying what should student learn and what should be achieved.

- Defining content, selection of important (big) themes and defining program structure.
- Selection and development of teaching methods and means.
- Selection of literature and other educational materials.
- How (in what way) will the students be evaluated to assess achieving learning outcomes.

The quality evaluation methodology considers present situation description in relation to the quality evaluation targets, quality evaluation of implemented activities based on quality indicators, activities and according evidences (Appendix #57).

The university has data system and information, which is continuously renewed/updated and includes “long” list of the data: e.g. data for students’ progressions (advancement from semester to semester), teacher/student ration, number of graduates etc. Also it is known that their (most of the indicators) capacity is quite limited and “add on” to the information to be collected for the purpose; The university uses indicators for quality evaluation: (i) for legitimation (reports on implemented activities), (ii) evaluation (to monitor results), (iii) discussions (interactive use of the data) and (iv) decision making (using of data for changing processes).

Official structures and bodies of the university ensure format of cooperation with quality assurance service (QAS) in the process of quality assurance, QAS creates quality assurance team, with obligatory participation of the academic staff and students, to plan, monitor and evaluate annual self-assessment of the university. The experience of the QAS (including by this approach) showed that involvement of academic community members brings additional benefit regarding improvement of teaching and learning processes.

Moreover, development in this direction requires next steps to take, particularly to have more dialogue with the staff regarding their individual role in quality assurance processes and readiness for the self-assessment of quality of their work performed.

The size of the university and its orientation on only medical field only enables centrally (university level) created quality assurance service to use strengths of such (central) structure, e.g. unified quality assurance approach, easy link with institutional strategy, being focused on faculty needs (somehow “decentralized”), easy communication with university staff, defends university from the risk of duplicating and different approaches of responsibilities. Accordingly QAS has external and internal (university) responsibility. Its responsibilities regarding external quality assurance is communication with the Ministry of Science and Educations, as well as with National Centre for Educational Quality

Enhancement. QAS also cares on the university image at international and national levels (see the reports delivered by QAS for external quality assurance means).

Over the past years, the University has undergone the following quality assurance evaluations by these bodies:

<b>Nº</b>	<b>Date</b>	<b>Accreditation/Authorization</b>	<b>Programs</b>	<b>Review Body Format</b>	<b>Format</b>
1.	July/2011	<b>Authorization</b>	University	National Center for Educational Quality Enhancement – Authorization Council of Higher Education Institutions	Self-Assessment Report & Questionnaire 3-Day Site Visit by External Review Team
2.	November/2011	<b>Accreditation</b>	MD; PhD	National Center for Educational Quality Enhancement - Accreditation Council of Higher Education Institutions	Self-Assessment Report & Questionnaire 3-Day Site Visit by External Review Team
3.	May/2012	<b>Accreditation (annual report)</b>	MD; PhD	National Center for Educational Quality Enhancement	Self-Assessment Report & Questionnaire
4.	June/2012	<b>Authorization (annual report)</b>	University	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
5.	May/2013	<b>Accreditation (annual report)</b>	MD; PhD	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
6.	June/2013	<b>Authorization (annual report)</b>	University	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
7.	May/2014	<b>Accreditation (annual report)</b>	MD; PhD	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
8.	July/2014	<b>Accreditation</b>	MD e-PBL	National Center for Educational Quality Enhancement - Accreditation Council of Higher Education Institutions	Self-Assessment Report & Questionnaire 3-Day Site Visit by External Review Team
9.	June/2014	<b>Authorization (annual report)</b>	University	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire

10.	May/2015	Accreditation (annual report)	MD; MD e-PBL; PhD	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
11.	June/2015	Authorization (annual report)	University	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
12.	May/2016	Accreditation (annual report)	MD; MD e- PBL; PhD	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
13.	June/2016	Authorization (annual report)	University	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
14.	October/ 2016	Authorization	University, define limited number of students	National Center for Educational Quality Enhancement – Authorization Council of Higher Education Institutions	Self-Assessment Report & Questionnaire 3-Day Site Visit by External Review Team
15.	May/2017	Accreditation (annual report)	MD; MD e- PBL; PhD	National Center for Education Quality Enhancement	Self-Assessment Report & Questionnaire
16.	July/2018	Authorization	University	National Center for Educational Quality Enhancement – Authorization Council of Higher Education Institutions	Self-Assessment Report & Questionnaire 3-Day Site Visit by External Review Team

### Criterion 7.2 Teacher and student feedback

Obtaining feedback for continuous development is the main element for Quality Assurance and is considered for the evaluation of number of standards, also it is important that obtaining (collecting) of the feedback is performed by various mechanisms and surveys/questionnaires is one among them.

In this regard the results of the self-assessment helps us to get valuable information on the perception of stakeholders on the issues and combining of results with other data enables to see the whole picture.

The feedback regarding issues of teaching and learning is collected from all stakeholders, who have influence on the process, including students, teachers and administration. Our experience shows that the most “challenging to collect” is information from teachers, though necessary. Such questionnaire cover broad range of aspects starting from daily working environment, support etc. continued by university mission and faculty objectives, which is good material to “hear opinion” of the staff regarding their positions, responsibilities etc.

Participation of the students in quality assurance processes, is not limited by giving feedback and getting information. They are involved (and involvement should be continued) in quality assurance through:

- (i) Giving feedback ( e.g. surveys)
- (ii) Participation in preparing self-assessment report and
- (iii) Involvement in university governance and management (membership in decision-making committees)

Accordingly students are part of the process (development of the quality assurance} as equal partners and that helps them to understand their own responsibility on education quality.

The university more and more frequently uses surveys of external evaluators, graduates. University obtains feedback from graduates on the issues of program improvement, as they could be the most relevant evaluators of the influence of educational programs on their career achievements. University tries to “maintain” each student through meeting, joint activities and creating opportunities for continuous professional development. In such cases their contribution is increasing e.g. increasing of response rates during surveys.

### **Criterion 7.3 Performance of students and graduates**

Medical School is analysing achievement of the students and graduates, its mission in relation to learning outcomes, curriculum and other issues. The data is collected and analysed regarding achievements and career development of graduates (Appendix #2; 7). Performs analysis of students` progress, studies reasons for “success” and “failure” to plan curriculum, select students and/or giving them advises.

In 2016-2017 and 2017-2018 academic years the analysis of first year students` academic success in context of united national exam results was performed. The aim of the study was

to improve admission requirements/criteria based on the results of united national exam (Appendix #21).

The following metrics were used to describe learning progress of students: (a) index of “access to the quiz” – measures and evaluated overall ongoing/daily performance; (b) index of “passing the quiz” – summarizing assessment, which measures and describes that the results planned by educational module were achieved, at least minimally. The following were used during preparation of the report: 1) Information used by National Assessment and Examinations Centre (amount of grants obtained by school-leavers, at which choice they were enrolled, raw/scaled scores of the exams they took and competitive score, by which elective discipline school-leaver was enrolled) and 2) The scores of students at summarizing complex test examination of the module. The study provided practical recommendations, which were taken into account by the university during planning student’s contingent and requirements. The admission criteria through United National Exams were analysed and the criteria were changed.

#### **Criterion 7.4 Involvement of stakeholders**

Academic staff, students are involved in the QA Self-Assessment teams. Also, in the committees and councils for planning, implementation, management and governing of educational programs (e.g. rector`s council, curriculum committee, faculty council). Their involvement in working groups created for curriculum revision and/or other special (particular) matters is also important and very useful. In order to obtain “quality” feedback on the program, learning outcomes and other important issues DTMU ensures inviting of employers at faculty events including career days, students conferences, formal and informal meetings for joint initiatives. University supports inviting of employers for participation in lectures and seminars and to discuss real situations. All above mentioned created prerequisites for employers informed participation in program development and obtaining of the feedback.

## 8. Governance and Administration

### Criterion 8.1 Governance

David Tvildiani Medical University (DTMU) has defined organizational structure of its governance and administration (Appendix #58). Functions and responsibilities of the structural units are clearly defined and described in their (structures) statutes and/or rules of activities (Appendix #59) The organizational structure of the University is provided by joint work with the activities defined by the Strategic Development Plan (Appendix #58). It is important in this regard (the selection of the strategy and defining of the organizational structure of DTMU) the way of university development; during the university creation period: Values based on personal interaction and joint (similar) values, less formalized; at the same time with integration of private (DTMU was established and is revenue-oriented private entity) and public interests (when some "freedom" granted to the private organization is used to focus on the activities of the University and public interest (Appendix #9).

Currently, it is at the level of structural integration (maximal possible quality from decentralization), which is a rational development path for the following reasons: (i). Organization structure and parts thereof exist and the necessary ties are established; (ii). The units, departments, structures, functions and objectives are set out and have specific duties and responsibilities; (iii). The University has experience and practice of using vertical and horizontal communication channels to speed-up information transfer and therefore (iv). It is able to take decentralized decisions and make the process "safe".

All of the aforementioned are important because the University enables structural units to act on the principle of cooperation and mutual support; the activity of the hierarchical levels of the management in the University depends on the quality of all others and is subject to the common objectives of the University and activities defined by the Strategic Development Plan;

- **Self-governing bodies of DTMU are** - "managing group", rector, chancellor, quality assurance service, rector's council, academic council, disciplinary commission.
- **Managing Group** - a self-governing body founded by the founder and accountable to the academic community;

- **Rector** – Executive chief of the University. Presents to the managing group and based on taken decision issues orders related to internal regulations, budget plans, regular reports, other documents (important for the whole University); the Rector has e Vice Rectors - in the fields of Educational Affairs, Strategic Management and Development and Research, each heading according departments and being member of the management group.
- **Rector's Council** - a self-governing administrative managing body, represented by members of the University academic community (teachers, students) and heads of other administrative units of the university. The council considers relevant internal regulations, budgeting plans, other documents, reports and statements; discusses issues of establishing organizational units, approves annual reports submitted by the dean.
- **Chancellor** - administrative manager in the field of economic, material and human resources (regarding technical personnel). Represents the HEI in financial and economic relations, within the scope of authority.
- **Quality Assurance Service** - an independent structural unit ensuring evaluation of research as well as overall institutional management, also development of the guidelines for sharing the standards of the higher education and the best international experience; closely cooperates with external quality control agencies. Representatives of the academic staff members and students are involved in the self-assessment group.
- **Academic Council** - The primary body in terms of scientific and academic activities which considers strategic plan, academic and research activities in the context of the strategic plan of the University, approves the curricula of faculty educational programs, also approves members of the dissertation council and decisions regarding granting of PhD degrees. Representatives of the students` self-governance (Students and Young Scientists` Scientific Association) are members of the Academic Council.
- **Disciplinary Commission** – a constituent body established for a fixed term, which discusses issues of disciplinary misconducts; the members are defined from the composition of the Academic and Rector's Councils. The number of students represented in the disciplinary commission cannot be less than half of the total number of commission members.

- **Medical School "AIETI", Faculty of Medicine** (hereinafter "Faculty") within defined scope of the university acts as independent structure (unit, part); it doesn't has independent budget. It makes decisions on behalf of the university in the issues discussed at rector`s and/or dean`s council. The school is responsible (together with other units of the university) for the implementation of strategic goals and plans of the university, particularly it is responsible for the development and implementation of educational programs, organization of scientific, research and other activities, adaptation in accordance with the law on higher education, bylaws and procedures of appointing professors, relations with external and other structural units, establishment of internal self-governance/organization of the school.
- The university has the vision of developing structural organization and management, its development concept, also reflected among others in its action plan; there are structures focused on development of quality assurance in the university; there is a practice of continuous communication among university structures of quality evaluation and monitoring and members of the academic community; Participation, involvement and keeping informed of the stakeholders in the processes of management, decision-making and activities is important for David Tvildiani Medical University and for the above-mentioned purposes involvement of the students in university collegial structures is ensured.

## **Criterion 8.2 Academic leadership**

At DTMU, types of organizational conditions and effectiveness are existence of self-governing organs and staffs' possibility to participate in decision making. Responsibilities are distributed among all managers, which means each of them have some level of own responsibility for human resources.

The activities of medical school AIETI includes following: developing and implementing educational programs, organizing scientific and research activities; adaptation procedure according to the national higher education law, managing external relations and other. Faculty is led by Dean.

The dean of AIETI Medical school is responsible for maintaining high standards in teaching, research and professional practice, bringing about educational development, building research capacity, contributing to the development and advancement of the institution,

developing external links, overseeing academic administration and activities of Medical Educational Centre, chairing faculty council and other committees, dealing with quality control and quality assurance, ensuring accreditation for the faculty, managing human resources , dealing with issues such as effective staff review, personal and career development.

**Faculty departments of education:** the organizations structure of faculty's departments of education promotes effective working of programs, and is considered as collaboration practice. Also is supporting Medical Doctor programme development. There are 7 departments at DTMU, 5 of them combine 39 disciplines (fields) to cover 74 courses in different modules. Also there is departments for scientific research and clinical skills training. Organizational structure of academic departments (Appendix #60):

- Reflects the so-called medical disciplines including specialized in the area, which facilitates communication between them: (i) what and in what amount is important to deliver inside the disciplines in program module; also (ii) is intended to develop programs: In the case of new modules, "Support" and participation is appropriately determined for development and deliver;
- Facilitates the planning of needed competencies (knowledge, skills, professional values) required in a wide range of disciplinary contexts for a student's. Monitoring and evaluation of step-by-step process of developing competencies.
- Facilitates research (other research activity) planning, engaging, and cooperation of research engagement and assessment section (especially doctoral projects)
- Involvement and representation of departments in the university structure and committees;
- Facilitates interdisciplinary cooperation within the framework of continuous professional development (inter-departmental and/or between fields) and/or in terms of CME (between the departments);
- Departments of basic-medical and clinical sciences, with discipline-specific characteristics, facilities and support students' future awareness for field-specific frame (medicine). Also it is important for future career choices and development: Their (specialization) in-depth awareness, support with individual curriculum and / or choice of scientific work.

In order to implement the clinical part provided by the departments, DTMU has signed agreements on cooperation with leading clinics of the country and university international partners (Appendix #33).

Medical Education Centre (MEC) is ensuring support, to implement the above mentioned collaboration and modern methods of teaching/learning/assessment. MEC main objectives are:

- Updating existing curriculum and promoting new curriculum development;
- Ensuring support and development of human resources in medical education, in professional as well as, personal skills
- Spreading information about activities, evaluations, updated and newly developed curriculum
- Development and implementation of sustainable educational technologies and systems, including online assessment systems
- Involvement in existed sustainable international medical education networks and creating new ones.

University has development approaches and strategy for professional development of staff. In management process, staff evaluation and satisfaction survey results are used (Appendix #4.1/2)

### **Criterion 8.3 Educational budget and resource allocation**

Financial state of the university is stable and rising, and ensures fulfilment of activities written in strategy development plan.

In order to implement activities, after analysing the information provided by the structural units of university during the formation of the 2018 budget, it was envisaged in the expenditure portion of the budget in accordance with the requirements of the Economic Classifier Headings.

DTMUs expenditures are planned in parallel to the planning of budget incomes. In planning the amount of expenditures, it is important firstly to take into consideration the funding of all necessary expenses, which are laid on the university, as an entrepreneurial entity, in accordance with the normative acts adopted by the applicable legislation in the country and the authorized bodies of the university. Such expenses include state taxes and fees, execution of salary liabilities undertaken by the staff timetables and contracts, granting scholarships, settlement with suppliers and service providers, payment of membership fees, student mobility, research financing etc.

The workload of the pedagogical staff in DTMU is defined by the provision (Appendix #18). The document reflects the norms of calculation and use of workload of professors and teachers in DTMU, norms of teaching and non-teaching working hours and teaching workload norms for additional (hour) salaries.

University leadership has stated DTMU budget priorities of year 2018

- Development of educational and informational resources (to support learning/teaching and research processes)
- Intensify relationship with leading European universities (exchange programs, official missions, conferences, internationalization etc.)
- Scientific-research activities (scientific business vacations, conferences, funding research, internationalization)
- Implementing infrastructural projects (completing existed construction, renovation of building)
- Improving and developing learning environment
- Increasing staff qualification (training, organizing courses, including studying of foreign language)
- Supporting different initiatives (individual scholarships, staff encouraging, supporting students' initiatives and etc.)

System of financial management and control is newly developed and at the moment it is in the mode of testing. For future it is defined to create document of assessment of functioning of factual financial management control system, and to take into consideration appropriate recommendations.

The mechanisms of managerial accountability, financial management and control are developed by the institution's charter. To be more specific, only University President has right to be the managerial ruler of the LLC. Moreover, in accordance with the Law of Georgia "On Higher Education", by appointing the Rector the President is delegating the management authority in order to maintain uninterrupted implementation of the university's activities. The President is involved in the control of budgeting and execution through the Managing Group. The institution defines and analyzes economic and accounting policies, also performs accounting in accordance with the financial and fiscal policies recognized in accordance with the provisions of the financial department. The financial department and its representatives are responsible for the reporting and accounting to the internal or state budget within the framework of the approved budget by the Rector,

through involvement of Strategic Management and Development Department, Faculty and considering target benchmarks.

In order to improve the financial management and control system, also to increase effective use and allocation of resources and to decrease or avoid misuse, the university has developed a document, which is implemented in accordance with the university's charter, rules of activity, Regulations and Conceptual Document of Human Resources Management (Appendix #61).

### **Criterion 8.4 Administrative staff and Management**

At DTMU it is important to retain and enhance existed resources and their effective allocation. In that context, DTMU consider strengthening of human, material, library, IT and research resources and their effective allocation.

In terms of enhancing effective management of human resources, range of staff and structural changes were conducted during the last years. Self-governing body was founded, consisting of founder, rector, 2 vice-rectors and chancellor. Department of Strategy Management and Development was created and other administrative units were supported with additional staff.

Administrative staff and its management organization is supporting university to implement effective working:

**Managing group** – a Self-governing body created by founder is responsible for reporting only to academic society.

**Rector** – the University's executive director. Rector presents to the managing group and based on decisions made, releases orders for internal regulations, budget plans, regular reports, other documents (important for the whole University). The Rector has three vice-rectors - in educational affairs, strategic management and development and research, each of them is chief of appropriate department and is a member of the managing group.

**Chancellor** - administrative manager in the field of economic, material and human resources (with technical personnel).

**Quality Assurance service**, also ensuring evaluation of research and institutional management.

University's other academic and administrative parts are: educational department, Department of Strategic Development and Management, Medical Education Center, Daphne Hare Medical Library, Rector's Office, Chancellor's Office; Faculty - Dean's Office, Other Offices.

**The Department of Education** - is responsible for ensuring the proper functioning of the learning process, planning, organizing, control and analysis. The Department incorporates the Training Methodology Division, Computer Training and Evaluation Center, Training Inspectors;

**The Department of Strategic Development and Management** facilitates the work of the Managing Group to develop the Strategic Development Plan of the University, based on an in-depth analysis of self-assessment of the current situation in university. The Pro-rector is chair of the Strategic Development and Management standing committee. Its scope of responsibility is also Department of Foreign Affairs, Department of Records and Human Resources, Department of Public Relations and Marketing.

**Daphne Hare Medical Library** – ensures academic and educational process, scientific-research and pedagogical working, through literary and informational materials.

Under the Rector's direct subordination lies the financial and legal departments. The Financial Department is responsible for implementing the economic and accounting policies established by the institution and on actions within the established budget. The Legal Department provides the legal provision and expertise of the activities carried out by the institution as a whole and of each structural unit.

The Chancellor's responsibility includes Information Technology Department, Security and Safety Service and Economic-Technical Service;

Faculty Departments – scientific-research, post-graduate education and continuous professional development, doctoral committee, career development assistance and graduate cooperation, faculty departments (directions) and clinics.

It was important to define strategies for human resource management, to ensure establishment of functional structure, with new approaches of effective use of human energy and skills. This structure in itself also means, that all managers existed in an organization have responsibility for human resource management (Appendix #62).

Staff management, usually includes wide list of rights and responsibilities (seeking staff, assessing work, learning, development, relationships and etc.). All above mentioned functions are important and could be carried at two levels: operational level is carried out on a daily working; at the same time, part of these functions also include strategic element, which means their integration into university goals and human resource management. To be noted, at DTMU responsibilities are distributed and each manager have its own part of responsibility to human resource management.

The general management system implies planning, development and control of existing human resources, which also includes:

In planning process to:

- Prognosis and planning of staff demand, defining specialization and level of qualification
- Defining eligibility criteria and requirements for selection of candidates: For the academic staff, the academic council is defining, based on recommendation from the Faculty and the Rector is approving. For the other departments, Structures and/or Committees, the mentioned departments, the Strategic Development and Management Committee are involved, and approval by the Rector's Council, or Chancellor, or Vice-Rector etc.
- Personnel Development Plans (Medical Education Center, Educational Department, Faculty)
- Normative documents (staff arrangement, position instructions, etc.)
- Planning of staff remuneration funds (head of financial department)

Development and retraining of HR:

- Retraining and development of personnel: based on survey analysis conducted by QA service, development and/or preparation of appropriate materials and/or training courses. The separate function is allocated for personnel accounting program, which allows for each employee's personal case and data about the workplace (stored at the personnel office).

Control: The control system is based on data that defines their discipline, initiative and working character. Control of the staff activity, by no mean should be turned into a total control system.

At DTMU, the coordinating activities of the staff are managed by the Strategic Management and Development Committee of the University. The University understands, that the HR management needs for a complex approach and that the management process is not the responsibility of just the personal office. The task lies in building a complex HRM system and therefore responsibility lies on all managers (rector, vice-rector, chancellor, dean etc.). Part of the aforementioned functions (HRM) are performed at operational, part at strategic and both (strategic + operational) levels

Completion of action plan is coordinated by Strategic Management and Development Committee, each structural committees of the institution is the member of above committee. In this format, structural committees are reporting conducted work, which enables better evaluation and improved planning of problem solving. Head of Strategy Management and Development structure is accountable to Rector (in charge of budget), that in frames of action plan outcomes of staff (operational managers) activities are in accordance with university goals defined by action plan.

There is internal system of financial management and control in the institution, which ensures comprehensive completion of university policy, strategies and goals of action plan by members of academic society and self-governing organs.

Rector is the top manager, who rules the program resources to reach the planned goals. Is responsible for implementing program activities of action plan and achieving final results. Rector is the only person in the university who is in charge and rule the budget.

Internal audit for managerial work is controlled by head of QA service, through monitoring and evaluation, which releases independent, objective and rational credentials for governance, describing operational functioning of internal control system.

### **Criterion 8.5 Interaction with health sector**

University strategy plan includes all aspects of development. Each of them, starting from university mission and ended with each goal of action plan, is considered as beneficial contribution to society's wellbeing. Aspects of university working such as program improvement, teachers' preparation, supporting students and so on. University development itself and strengthening is seen and directed to develop society and health sector, including sharing knowledge and building knowledge-based society.

University is collaborating with interested national and international parties, governmental and non-governmental organizations, professional associations, other universities and academic groups, with participation in different events organized/planned by DTMU or with collaboration. There are different formats of collaboration including: debates, discussions, sharing knowledge and experience, conferences, including the ones founded by DTMU – Improving Standards of Education (ISE), student-organized conferences and events.

Medical School “AIETI” faculty of medicine (further “Faculty”) is oriented to provide students medical education and research, implements students’ preparation in undergraduate and post-graduate medical qualification. Medical school is providing two residency programs of Family Medicine and Internal Medicine.

To ensure program implementation university is having official contracts with 31 clinical settings. Elected (44) and invited (46) professors and teachers together with pedagogical work are providing clinical and scientific working. For selected staff this is counted as pedagogical work and receives appropriate salaries.

- ✓ University implements scientific-research projects at 37 clinical settings and/or in 13 collaboration with scientific research organization; by this way it is contributing in science development, including elaboration of valuable recommendations for Georgian population.
- ✓ DTMU as an institution, as well as, members of academic society is collaborating with governmental structures of medicine and medical education:
  - Elaborating field-specific standards
  - Establishing CME system
  - Involvement in residency programs and preparing for licensing exams.
  - In scope of university competencies, to support and facilitate development of professional associations in expert working, it is ensuring involvement of university staff and students
  - Involvement into professional associations is counted as workload for teachers.
  - Facilitates organization of associations events
  - Support (also financially) collaboration of professional associations at a national and international level
- ✓ Support students involvement into national and international professional associations
- ✓ There is communication between health sector (services of different specializations) and other interested parties to develop education program (learning outcomes)

- ✓ Is collaborating with interested medical settings, to provide CME programs interested to them
- ✓ Collaborates with different universities in terms of elaborating new educational programs and provide training courses about new teaching methods

To more widen the scope, it is important to mention participation of DTMU teachers and PhD candidates in free of charge medical examinations for vulnerable groups. Also in TV shows oriented to raise awareness of population about different medical issues, there are organized consultation seminars about healthy lifestyle and preventive medicine at secondary schools, distribution of informational flyers and brochures (Appendix #63).

Events that are organized and conducted by DTMU students (some of them yearly) are following:

- ✓ "The norm and pathology of the human organism (anatomy) and functional (physiology) basic medical issues with clinical interpretation and system based organization" - Joint project of Georgian Nurses Association, DTMU and MediClubGeorgia; the course was provided to 27 nurses of the Association (Appendix #63).
- ✓ World Heart Day – an event prepared by DTMU students to raise public awareness (theatrical play, flyers, etc.). In various districts throughout Tbilisi.
- ✓ International Day of Diabetes - joint action of DTMU students and supermarket "Goodwill" (stand, flyers, slogans supplied for healthy lifestyle and diabetes prevention, consumer consultations and explanation of diabetes prevention mechanisms and/or management tools).
- ✓ Screening Center "Children for Parents against Breast Cancer" included 40 DTMU students
- ✓ First Aid training at the University (120 participants) and at schools (600-650 pupils);
- ✓ "Immunization and Vaccinology Association" founded by DTMU Group for the purpose of education and raising awareness in society;
- ✓ Volunteering of DTMU students (30 students) in the Vere Gorge after flooding in June 2013 to help clean up the area and provide first aid to the victims;

DTMU has been cooperating with the "Solidarity Foundation" since 2015; also helps international humanitarian Union "Catharsis", sponsors mass media.

Supporting students in the above mentioned activities is also important for their career development, to realize their professional links and identity.

## 9. Continuous Renewal

- *Adaptation of mission statement and outcomes to the scientific, socio- economic and cultural development of the society. (see 1.1)*

Mission of the university considers and is in compliance with the main goals and priorities of Georgian and European higher medical education; Considering its mission and values university has in place its strategic development and action plans; Collaborative work (by involvement of stakeholders) is underway in the university targeting adaptation of the mission and program outcomes; Activities (including those to reach learning outcomes) and work outlined in the action plan has logical links with aims and objectives; the University has the plan for monitoring implementation process of the activities. Also, there is a policy and experience for planning, renewal and development of the programs in place at the university; formal structures for revision and evaluation of the program (courses) exist. Stakeholders (students, teachers, employers) are involved in the process (see 1.1; 2.8)

- *Modification of the intended educational outcomes of the graduating students in accordance with documented needs of the environment they will enter. The modification might include clinical skills, public health training and involvement in patient care appropriate to responsibilities encountered upon graduation. (see 1.4)*

University studied requirements of the society (based on the analysis of the stakeholders surveys), considered national and international experience in medical education ( including amendments to the national benchmark documents performed in 2018) for program update means, modification of the learning outcomes was performed (see revised curriculum) through focusing on present needs (based on studies), particularly the changes targeted clinical, professionalism and public health themes and scientific research competencies.

- *Adaptation of the curriculum model and instructional methods to ensure that these are appropriate and relevant. (see 2.1)*

Curriculum model enables reaching of program aims and learning outcomes and is in compliance with international requirements, accordingly it is integrated by modules around

human body organ systems, spirally organized and throughout whole vertical is focused around 4 main themes: (1) Basic and Clinical Sciences, (2) Clinical and Communication Skills, (3) Public and Population Health and (4) Personal and Professional development. It is supported by relevant/adequate methods of teaching, learning and assessment (2.1)

- *Adjustment of curricular elements and their relationships in keeping with developments in the basic biomedical, clinical, behavioural and social sciences, changes in the demographic profile and health/disease pattern of the population, and socioeconomic and cultural conditions. The adjustment would ensure that new relevant knowledge, concepts and methods are included and outdated ones discarded. (see 2.2 - 2.6)*

Evaluation of compliance with recent achievements in biomedical, clinical, behavioral and social sciences, as well as compliance with population and cultural context is permanently considered while planning changes of curriculum elements. In this regard one of the examples is embedding of PBL cases (weeks) into the integrated educational modules at the basic and clinical sciences stage. The format of PBL considers patient cases and process of solving his/her (patient) problems requires from students performing such tasks which is related to the development of knowledge and skills in Basic and Clinical Sciences, Clinical and Communication Skills, Public and Population Health and Professionalism issues (see 2.2.-2.6).

- *Development of assessment principles, and the methods and the number of examinations according to changes in intended educational outcomes and instructional methods. (see 3.1 and 3.2)*

The university has defined principles and approaches for the assessment (in compliance with modern knowledge available in medical education area), also university is continuously working on staff development regarding assessment methods, including through international partners (EBMA, NASCE). The program has defined, piloted and implemented assessment methods relevant to the learning outcomes. In whole assessment system means:

- Existence of combined system (current and summative) of assessment;
- Different methods of assessment are used: written (MCQ), oral, assessment of activity in PBL, Mini CEXs based exam, assessment at “patient’s bedside”, portfolio, assessment of reference paper/scientific works;

- Assessments and examinations cover course content and program (topics and modules) in whole amount;
- There is possibility of summative assessment of all academic topics/study components either in current or the system to be studied (in written and oral form);
- Assessment corresponding to teaching stages: revealing the students who are allowed (according the reached stage) to next stage of teaching or who needs to repeat the program;
- In the assessment of the student teachers, PBL tutors, program directors, examination center, external expert (6th year summative exam) are involved;
- Assessments and examinations cover program goals/objectives entirely.

#### Format

Balance is corresponding between formative and summative assessments to make decisions concerning study and academic progress (by the preference of formative ones). Student can get such feedback on study everyday: in everyday practical class (practical sessions, Mini CESx, etc.), when working in PBL format weekly, in each module subject block (oral exam), during discussion of module summative exam and discussion of results (by student's will), through stage exam results, simulation, after communication with standardized and/or real patient, analysis of portfolio (3.1.–3.2)

- *Adaptation of student recruitment policy, selection methods and student intake to changing expectations and circumstances, human resource needs, changes in the premedical education system and the requirements of the educational programme. (see 4.1 and 4.2)*

University periodically reviews admission requirements and procedure. Yearly defines and sends to National Examination Center priorities for profile subjects and demanded level of knowledge of subjects and/or changes the above mentioned aspects. Last modification was made (in 2018) for students contingent of 2019/2020 academic year. Change was based on analyzing the result of university research conducted during the last 2 years. The study provided practical recommendations, which were taken into account by the university during planning students contingent and requirements. The admission criteria through United National Exams were analyzed and the criteria were changed (4.1, 4.2, 7.3)

- *Adaptation of academic staff recruitment and development policy according to changing needs. (see 5.1 and 5.2)*

The university has developed and approved the document on pedagogical staff workload at David Tvildiani Medical University, which is focused on development of academic staff. David Tvildiani Medical University has developed and implemented the rule for recruitment and selection of the academic staff. The rule is in full compliance with Georgian Law “On Higher Education”. The process of selection and appointment of the staff at academic positions is performed in accordance with requirements of Georgian legislation, Statute of the University, Internal Regulatory Documents etc. through open and public completion, based on transparency, equality and fair competition principles. The types and norms of educational/methodical, scientific-research and organizational / methodical work have been defined, which implies lecturing, preparation for other teaching activities, organizational-methodical work for scientific-research work as well as clinical activities (for clinical disciplines teachers), which can be calculated as annual teacher workload of teacher (5.1 and 5.2)

- *Updating of educational resources according to changing needs, i.e. the student intake, size and profile of academic staff, and the educational programme. (see 6.1 - 6.3)*

The university realizes the need for renewing and developing educational resources. This is proved by the expenses on infrastructural project held by the university during last decade; access to the new library and e-resources (Body Interact, Openlabyrinth3, Moodle, 3D Anatomy Atlas, Progress Testing, Turnitin), ensuring of continuous development of other educational and library resources, development of resources and staff for clinical trainings, establishment of the central scientific-research laboratory to support Research-Based Learning, Realization of available national and international collaborative potential to develop research and teaching (6.1. - 6.4 )

- *Refinement of the process of programme monitoring and evaluation. (see 7.1 – 7.3)*

Curriculum development through systematic and justified ways is the key element in DTMU for ensuring program quality. Main elements for internal quality evaluation of its continuous development are:

- Defining program aims and learning outcomes; specifying what should student learn and what should be achieved.
- Defining content, selection of important (big) themes and defining program structure.
- Selection and development of teaching methods and means.
- Selection of literature and other educational materials.
- How (in what way) will the students be evaluated to assess achieving leaning outcomes.

The quality evaluation methodology considers present situation description in relation to the quality evaluation targets, quality evaluation of implemented activities based on quality indicators, activities and according evidences.

Official structures and bodies of the university ensure format of cooperation with quality assurance service (QAS) in the process of quality assurance, QAS creates quality assurance team, with obligatory participation of the academic staff and students, to plan, monitor and evaluate annual self-assessment of the university. The experience of the QAS (including by this approach) showed that involvement of academic community members brings additional benefit regarding improvement of teaching and learning processes.

Moreover, development in this direction requires next steps to take, particularly to have more dialogue with the staff regarding their individual role in quality assurance processes and readiness for the self-assessment of quality of their work performed. (7.1)

- *Development of the organisational structure and of governance and management to cope with changing circumstances and needs and, over time, accommodating the interests of the different groups of stakeholders. (see 8.1 – 8.5)*

David Tvildiani Medical University (DTMU) has defined organizational structure of its governance and administration. Functions and responsibilities of the structural units are clearly defined and described in their (structures) statutes and/or rules of activities. The university has the vision of developing structural organization and management, its development concept, also reflected among others in its action plan; there are structures focused on development of quality assurance in the university; there is a practice of continuous communication among university structures of quality evaluation and monitoring and members of the academic community; Participation, involvement and

keeping informed of the stakeholders in the processes of management, decision-making and activities is important for David Tvildiani Medical University.