Approved:
at Academic Council of TSMU
Protocol № 24 /1, 10.09.2020

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Professor Zurab Vadachkoria,
Head of the Academic Council,
Rector

Considered:
at Board Council of TSMU International Faculty of Medicine and Stomatology
Protocol # 1, 08.09.2020

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Assosiated Professor Davit Topuria,
Head of the Faculty Board Council,
Dean

Tbilisi State Medical University

International Faculty of Medicine and Stomatology

Educational Program - Dental Medicine

Tbilisi
2020

Title of the Educational Program

Dental Medicine

Level of the Higher Academic Education

One-Step Program

Qualification to be awarded

Doctor of Dental Medicine (DDM)

Medium of Instruction

English

Program volume, in credits

300 credits (ECTS)

Duration of the study

5 years, 10 semesters

Head of the Program

Dea Vadachkoria

Associate Professor at the Department of Clinical Prosthodontics

Preamble

Dentistry (Stomatology) also known as Dental or Oral Medicine is considered as one of the most important directions of Medicine and health care. That consists of the study, diagnosis, prevention of disease, disorders and conditions of the oral cavity. Dental Medicine is not limited to dentition, but also the oral mucosa and of adjacent and related structures/ tissues, such as maxillofacial area and craniofacial complex. It aims at protecting the oral cavity, to maintain and improve human health as a whole. All the above-mentioned can be achieved only by providing medical/dental education according to the international standards that require development of educational program (and curriculum) based on the modern, latest information of the field and envisaging the demands of the society.

Objectives of the program

Educational program ,,Dental Medicine" is designed to prepare a highly qualified, competitive, Doctor of Dental Medicine with the competence relevant to modern requirements. In other words, the program aims to equip graduates with knowledge and skills based on which a Doctor of Dental Medicine will be able to hold a working position in dental clinics, continue education on the next level of higher and/or professional education (residency, doctoral degree (PhD)) and specialization, as well as, realization and career advancement in public or professional activities.

The goals of the program, in more detail, means to train the student in the following directions:

- Apply and critically understand the basic knowledge of biomedical disciplines, clinical sciences and medical field in process of high quality patient care in relation to the profile issues of dental medicine / dentistry;
- Diagnose the health problems of dental patient timely, in an appropriate and effective manner;
- Take effective measures for the prevention of dental diseases;
- Treat, manage and promote the dental patient with patient-centered care;
- Communicate with the dental patient in an effective and professional way;
- Self-develop within the current legislation based on highly professional and ethical values.

Requirements/Pre-requisites prior to the program

and procedures for admission one step Educational Program for Doctor of Dental Medicine (DDM) are public, transparent and accessible. Information can be found on the University website.

Student enrollment is carried out in accordance with legislation (Georgian Law on "Higher Education", Article 52).

Prerequisites for admission DDM program are as follows:

- Applicant who wishes to be enrolled in the program, must have school-leaving certificate which qualifies student for university admission;
- All applicants applying for admission in the program must be interviewed by the relevant commission established by the order of the Rector of TSMU.
- TSMU has set English Language requirements (B2 level) for applicants who are enrolled in the English language educational program: all applicants are required to pass an English language proficiency test/go through the interview to determine English language proficiency according to the designated rules of the University. Applicants will be exempt from taking above–mentioned English language test, if the following criteria are met:
    - If applicant has graduated school/college/university in English;
    - When presenting a valid B2 certificate/ diploma of English language proficiency.

Enrollment at DDM educational program is also permitted via mobility (Order N10/n of the Ministry of Education and Science of Georgia 04.02.2010). Rules of external or intra-university mobility of students and recognition of educational credits earned during the study period is established by the Ministry of Education and Science of Georgia, as well as, the rules and regulations determined by the Tbilisi State Medical University. English Language requirements (B2 level) are set for those who are enrolled within mobility program. They must be transferred either from English Medium program or they have to provide valid B2 Level English language certificate. Otherwise they have to pass English language test/interview under the TSMU admission rules.

Learning Outcomes of DDM educational program

Upon completion of the program, the learning outcomes shall be expressed with general and sectoral competences that have been or should be acquired through the learning process by the graduate.

Criteria	1.General Competencies	2. Sectoral Competencies
1. Knowledge and	1.Basic biomedical knowledge required for professional	**Has knowledge in**: 1.1. identification of complex problems and

understanding	activity, realization of acquired knowledge in regards to the dental disciplines, as well as realization of dentist's role in maintenance and promotion of human health	principles of its solving in sectoral field 1.2. clinical dental sciences 1.3. importance of dentist's role in maintenance and promotion of human health, individually and as a team member in multidisciplinary professional setting.
2. Skills	2.1. Practical use of clinical skills mastered during learning biomedical and clinical disciplines	**Is able to:** 2.1.1. appropriately select and use dental materials, devices and instruments 2.1.2. provide consultation of dental patients 2.1.3. evaluate clinical cases of dental diseases and discuss disease management 2.1.4. perform simple dental procedures
	2.2. Formulate substantiated conclusions on the basis of analysis academic knowledge, clinical and latest scientific information	**Is able to:** 2.2.1 timely identify of characteristic clinical signs of particular (or complex) problems and formulate the necessary conclusion on the basis of existing and obtained information analysis data. 2.2.2 differentiate the normal and pathologic conditions, foresee the prognosis and risks.
	2.3. Possess the verbal skills for public relations and medical services considering information and communication technologies.	Is able to: 2.3.1 communicate with patients, their family members, medical and administrative personnel, healthcare professionals and social workers. Providing unpleasant information to patient and patient calm down as needed 2.3.2 engage in polemics, express own position in resolving conflict or controversial issues and/or adopt alternative consideration and recognition 2.3.3. provide timely and accurate data production and its presentation if needed

3. Responsibility and Autonomy	3.1. Study independently, to plan and understand the peculiarities of learning process	**Is able to:** 3.1.1. determine the range and depth of own knowledge, realize the gaps, consider needs and mark priorities 3.1.2. From the continuous medical education standpoint, utilize all opportunities for obtaining new knowledge to improve personal professional development, enrich the knowledge and advance in career
	3.2. Evaluate self and others attitude to existing values and contribute to establish new values	**Is able to:** 3.2.1. assess critically his/her and others capabilities and perform medical duties within undergraduate education competency, according to professional responsibility, ethical and legal standards. 3.2.2. objectively assess his/her and others attitude towards professional values and be ready to share personal professional experiences

After completion of the program, based on the specifics of the dental disciplines, a Graduate is able to apply knowledge in practice and should have:

- Ability to conduct routine medical/dental examinations; study and assessment of basic functional parameters of the body, gathering anamnesis, instrumental examination, obtained data registration, medical documentation management;
- Patient consultation; providing patients with sufficient explanations and recommendations based on the data obtained after gathering anamnesis and appropriate examinations;
- Elaboration and implementation of individual recommendations for prevention of oral diseases;
- Elaboration of oral hygiene recommendations taking into consideration patient's age and overall dental status;
- Selection of appropriate anesthetics and methods of local anesthesia in treatment, based on the indications; conducting anesthesia, providing first dental aid, clinical

reasoning of anesthesia, acquaintance with the mechanisms of the methods used, calculating relative risks, reasoning possible complications and ways to avoid them;

- Prescription of medications, dosage determination, definition of possible side effects, filling out prescription form;
- Diagnosis of carious and/or non-carious lesions/diseases, outlining treatment strategy/scheme, preparation of tooth hard tissues, application of oral protective insulating facilities (rubber dam, opal dam), dental filling-restorative materials and teeth filling;
- Diagnosis of pulp and periapical diseases, development of treatment plan, selection of instruments for tooth endodontic treatment and the root canal treatment;
- Diagnosing periodontal diseases, selection of appropriate methods and means for providing differential diagnostics and treatment, conducting professional oral hygiene;
- Identification, differentiation and diagnostics of clinical, paraclinical and laboratory elements of oral mucosa lesions, outlining the treatment scheme;
- Determining any need for involvement of other (medical) field specialists in disease management;
- Performing simple extractions of deciduous (primary) and permanent teeth, damaged by trauma, odontogenic infections or other pathologies.
- Administering the first aid for traumatic injuries to oral or maxillofacial areas, treatment and care of traumatic lesions;
- Participation in the management/care of the patients with acute maxillofacial trauma at the emergency care unit;
- Diagnostics of primary, secondary, partial and total adentia of the teeth, outlining prosthodontic treatment plan, taking the impressions, preparing a cast model from impression, preparing inlay/onlay/overlay, selection of proper prosthodontic construction, participation in dental technical laboratory process for preparation of various types of prosthodontic constructions and active involvement in treatment process;
- Diagnosis of occlusal anomalies, analysis of the results obtained from cephalometric x-ray examinations, development of treatment plan, participation in management of orthodontic anomalies using different orthodontic appliances;
- Evaluation of oral conditions in children and adolescents, differentiation of primary/ deciduous, mixed and permanent dentitions and acquaintance with age norms. Providing professional hygiene, planning prophylactic measures. Knowledge of the features of carious and non-carious lesions, pulp and periapical, periodontal and mucosal diseases; development of treatment plan, selection of treatment facilities and participation in the management of dental diseases in children and adolescents;

- Knowledge of congenital oral and maxillofacial anomalies/abnormalities, developmental disorders, traumatic, tumoral, acute and chronic inflammatory diseases in children and adolescents and participation in their management;
- Participation in providing differential diagnosis and developing treatment plan for oncologic diseases in oral and maxillofacial area;
- Understanding the principles of infection control in dental clinics and their use in practice;
- Assisting the Doctor of Dental Medicine and colleague-student in providing conservative, surgical, prosthodontic, orthodontic treatment;
- Keeping with the safety rules and regulations of patient and dental practitioner, identification of deontological, psychological and social problems and situation management within the competence.

Sectoral Competencies include the graduate's sectoral knowledge and sectoral skills:

Sectoral knowledge

- Biomedical (human anatomy, physiology, embryology, biochemistry, immunology, cytology), behavioral, social (psychology, human development, sociology) and preclinical sciences/disciplines;
- Clinical medical sciences/disciplines (pathomorphology, microbiology, internal diseases, surgery, children diseases, infectious diseases, anesthesiology, radiology and etc.);
- Clinical dental disciplines / sciences (children and adolescent conservative Stomatology/Dentistry; children and adolescent oral surgery; odontology and endodontics, prosthodontics; dental materials science, oral and maxillofacial surgery, management of periodontal and oral mucosa diseases; maxillofacial oncology, orthodontics);
- Awareness of pharmacological products' classification, mechanism of action, dosage, indication, possible side effects, filling out prescription form;
- Ethical and legal principles in medical and dental practice:
  - Patient's rights
  - Principles of colleague relationships
  - Rights of people with disabilities in the fields of medicine and stomatology (dentistry)
  - Role of the dental practitioner in the health care system - professional regulation systems.

Sectoral competencies/skills

- *Providing dental patient consultation*

Ability to gather anamnesis, knowledge and application of diagnostic methods and facilities, effective communication with the patient, objective inspection of oral cavity and maxillofacial area, analysis and interpretation of the results obtained after clinical-laboratory examinations to outline appropriate strategies for further management of the disease; differential diagnosis of pathologies with similar clinical signs and objective evidences; complex assessment of the patient's condition and determination of the need for conservative, prosthodontic, orthodontic and surgical treatment.

- *Evaluation of clinical cases related to the oral and maxillofacial area; discussions on disease(s) management*

Demonstrate the ability to make decisions and resolve complex clinical problems based on problem analysis conducted. Determine the sectoral problems (conservative, surgical, prosthodontic, orthodontic) and develop the schemes for disease management. Ability to provide differentiated approach to the problem solution in children, adolescents, adults and elderly patients, taking into account the patient's age.

- *Emergency dental care (within the competence)*

- Primary medical care at acute and chronic pulp and periapical diseases in children, adolescents and adults;
- Primary medical care at primary (deciduous) and permanent teeth injuries (crown-root fractures, complete and partial dislocations);
- Primary medical care for damaged prosthodontic constructions (cracked or broken ceramic crowns, broken/cracked removable constructions and etc.);
- Primary medical care at injuries/lesions of oral and maxillofacial area;
- Primary medical care at development of urgent situations (fainting, collapse, hypertensive crisis, drug or medication allergies) in dental clinics.

- *Selection of dental materials, facilities and instruments*

Anesthetic, oral cavity insulating (rubber dam, opal dam), filling, restorative, endodontic, impression and prosthodontic constructions' materials, instruments and means for tooth extraction, processing lesions, suturing and etc.

- *Performance of clinical procedures/manipulations (within the competence):*
  - Selection of the materials for caries prevention and dental fissure sealing/ hermetization;
  - Diagnosis of dental caries and teeth filling;
  - Use of vital pulp testing and apex location for root canal (endodontic) treatment;
  - Providing endodontic treatment and root canal filling;
  - Acquaintance with the principles of periodontal disease management, professional oral cavity treatment and conservative treatment of periodontal diseases;
  - Differentiation of oral mucosa diseases and providing primary medical care;

- Taking measures for prevention of deciduous and permanent teeth diseases in children;
- Managing simple and complex carious lesions of deciduous and permanent teeth in children and adolescents;
- Mastering in techniques used to conduct application, infiltrative and regional anesthesia;
- Determination of indications for tooth extraction and providing simple extractions;
- Processing lesions in oral cavity and putting the stitches /suturing;
- Following the rules for preparation of dental impression materials and taking impressions;
- Mastering in taking anatomical and functional impressions /imprints from the edentulous upper and lower jaws;
- Ability to fit the upper or lower complete removable dentures;
- Determination of central occlusion at total adentia;
- Acquaintance with the phases of making fixed and removable prosthodontic constructions at the dental technical laboratory;
- Acquaintance with step by step clinical procedures of making fixed and partially removable prosthodontic constructions inlay/onlays, full cast metal, PFM, plastic and ceramic partial and full crowns, removable partial plastic and metal-based constructions;
- Acquaintance with adaptation phases of partial and complete removable plastic and metal-based dentures and ability to provide appropriate recommendations to the patient;
- Acquaintance with periodontal disease treatment principles by using prosthodontic approaches; ability to perform selective grinding of teeth in periodontal disease treatment process;
- Ability to perform splinting of teeth;
- Ability to conduct treatment plan for further prosthetic construction on dental implants;
- Ability to diagnose tumor diseases in oral and maxillofacial area;
- Ability to diagnose the etiology, pathogenesis of abnormalities of single tooth and dental arch, as well as, jaw deformities and their treatment in children, adolescents and adults;
- Acquaintance with the materials, biomechanics, equipment, their classification, construction and operating principles of prophylactic, treatment and retentive techniques used in orthodontics;

- Acquaintance with etiology, treatment and prevention methods of jaw-dental system abnormalities developed as a result of unilateral and bilateral clefts of upper lip, alveolar bone, hard and soft palate, as well as, traumatic injuries of temporomandibular joint;

- *Communication with dental patient*
  - Ability individually communicate with patient and his/her relatives, colleagues; express personal opinion, listening to the controversial opinion, deliver bad/unpleasant news and calming down the patient - if necessary;
  - Ability to find a way out of difficult situations and long-term collaboration with the patient;
  - Ability to obtain informed consent from the patient (from his / her parent or guardian) on solution medical problems and mutual cooperation in this regard, based on assimilated and developed communication skills;
- *Following the ethical and legal principles in dental practice*
  - Understanding the obligations of the Doctor of Dental Medicine to care for human oral health as well as, overall health, in accordance with the ethical principles;
  - Maintaining patient dignity and provide participation of patient involvement in decision making on dental manipulations and treatment. Obtaining informed consent for dental examinations and treatment from patients;
  - Maintaining and protecting information confidentially about patients;

Structure of the educational program for Doctor of Dental Medicine (DDM)

(For detailed curriculum see **appendix**)

<table>
<tr><td rowspan="4">Duration
5 years</td><td rowspan="4">Volume
300 ECTS credits</td><td>106 credits</td><td colspan="2">Biomedical, social and preclinical sciences</td></tr>
<tr><td rowspan="3">184 credits</td><td colspan="2">Cycle of clinical disciplines, among them:</td></tr>
<tr><td>52</td><td>Non-profile/sectoral clinical disciplines</td></tr>
<tr><td>132</td><td>Profile/Sectoral clinical disciplines</td></tr>
<tr><td>10 credits</td><td colspan="2">Elective subjects</td></tr>
</table>

Semester	N	Study course	ECTS Credits	semester credits sum
I	1	*Georgian language 1*	4	30
	2	*History of medicine*	2	
	3	*Professional Latin language and Terminology*	2	
	4	*Human anatomy 1*	4	
	5	*Medical biology and parasitology*	3	
	6	*Medical chemistry*	5	
	7	*Medical physics and biophysics*	5	
	8	*Cytology and general histology*	5	
II	9	*Georgian language 2*	3	30
	10	*Basics of Scientific Research*	2	
	11	*Human anatomy 2*	6	
	12	*Systemic histology and basics of embryology*	4	
	13	*Molecular and medical genetics*	4	
	14	*Human Physiology 1*	5	
	15	*Medical Biochemistry 1*	4	
	16	*Principles of biopharmacy / elective*	2	
	17	*Principles of phytotherapy / elective*		
III	18	*Georgian language 3*	3	30
	19	*Human Physiology 2*	5	
	20	*Medical Biochemistry 2*	4	
	21	*General pathological anatomy*	4	
	22	*Clinical anatomy and operative surgery*	3	
	23	*Microbiology 1*	4	
	24	*Clinical skills*	2	
	25	*Pre-clinical operative odontology*	3	
	26	*Prevention of oral diseases 1*	2	
IV	27	*Bioethics*	2	30
	28	*Pathological anatomy of dental diseases*	3	
	29	*Microbiology 2*	3	
	30	*Immunology*	4	

	31	*Pharmacology*	4	
	32	*Pathophysiology*	4	
	33	*General hygiene*	3	
	34	*Pre-clinical Endodontics*	3	
	35	*Prevention of oral diseases 2*	2	
	36	*Physical factors in dentistry (elective)*	2	
	37	*Leadership (elective)*		
V	*38*	*Medical psychology*	2	30
	39	*Internal diseases 1*	4	
	40	*General surgery*	4	
	41	*Pediatrics*	3	
	42	*Phthisiology*	2	
	43	*Radiology*	4	
	44	*Preclinical periodontology*	4	
	45	*Oral surgery 1*	4	
	46	*Propedeutics in Prosthodontics*	3	
VI	*47*	*Internal diseases 2*	4	30
	48	*Surgery*	4	
	49	*Dermato-venerology*	4	
	50	*Infectious diseases*	4	
	51	*Propedeutic of operative odontology*	4	
	52	*Children and adolescent conservative dentistry 1*	3	
	53	*Oral surgery 2*	4	
	54	*Phantom based Prosthodontics 1*	3	

VII	*55*	*Neurology*	3	30
	56	*Eye diseases (Ophthalmology)*	2	
	57	*Ear, Nose and Throat Diseases*	2	
	58	*Hematology*	2	
	59	*Allergology*	2	
	60	*Propedeutic of endodontics*	4	
	61	*Oral surgery of children and adolescent*	3	
	62	*Maxillofacial surgery 1*	3	
	63	*Orthodontics 1*	3	
	64	*Phantom based Prosthodontics 2*	3	
	65	*Endocrinology (elective)*	3	

	66	*Traumatology (elective)*		
VIII	*67*	*Psychiatry*	3	30
	68	*Forensic Medicine*	3	
	69	*Health Care Management, Financing and Economics of Dental Diseases*	2	
	70	*Children and adolescent conservative dentistry 2*	2	
	71	*Maxillofacial surgery of children and adolescents 1*	3	
	72	*Clinical periodontology*	6	
	73	*Maxillofacial surgery 2*	4	
	74	*Orthodontics 2*	3	
	75	*Phantom based Prosthodontics 3*	4	
IX	*76*	*Maxillofacial surgery of children and adolescents 2*	4	30
	77	*Clinical Periodontology and Oral Diseases in Children*	5	
	78	*Oral mucosal diseases*	6	
	79	*Maxillofacial surgery 3*	5	
	80	*Orthodontics 3*	3	
	81	*Clinical Prosthodontics 1*	4	
	82	*Oral cavity, head and neck oncology*	3	
X	*83*	*Clinical operative odontology and clinical endodontics (Clinical integration course)*	7	30
	84	*Children and Adolescents Oral and Maxillofacial surgery (Clinical integration course)*	3	
	85	*Communication skills*	2	
	86	*Maxillofacial surgery 4 and Implantology*	6	
	87	*Orthodontics 4*	3	
	88	*Clinical Prosthodontics 2*	6	
	89	*Reanimatology (elective)*	3	
	90	*Pediatric neurology (elective)*		

Methods, used to achieve learning outcomes /competencies

The objectives, tasks and outcomes defined within the educational program are achieved through the cycle of theoretical and practical (including curation) sessions. During developing academic knowledge, a future Doctor of Dental Medicine assimilates theoretical subjects within the hours allocated for independent work, while the contact hours are dedicated to the seminars, working in simulation environment, hands-on teaching at dental techniques and role playing.

Besides of consultation and treatment of patients with dental diseases under the supervision of University professors and invited teachers, dental students are given opportunity, from the very beginning of their studies, to develop their manual/practical skills and perform different type of dental manipulations on the phantoms and models.

Student-Centered Teaching:

The students are actively involved in the study process. Development of sectoral skills is started at pre-clinical cycles of educational process. Prior to involvement in the process of counseling, examination, diagnosis and management of dental diseases on patients, students should be acquainted with practical skills/competencies to be used for independent work on dental simulations, phantoms, artificial and extracted teeth. At the seminar-sessions, students prepare abstracts, presentations and actively participate in solving illustrated tasks.

Educational process for future Doctor of Dental Medicine in clinical environment is based on case-based learning (CBL), Case-based clinical reasoning (CBCR), participation in role playing games (role of dental practitioner, dental assistant, patient, relatives of the patient). Passing the cycle of clinical training the student is actively involved in the patient examination and treatment process under the supervision of the teacher (within his/her competence).

The program is designed logically. The program components are adequate to appropriate level of education. Each component assumed to maintain its own knowledge and skills, already assimilated by the students and on the other hand, they are considered as prerequisites for "successor" component /course assimilation. According to the curriculum, prerequisite and "successor" disciplines are not taught in parallel. neither during the repeated course (subject).

Successful study of all basic and preclinical disciplines, according curriculum, in the first - fourth semesters of the educational program of Doctor of Dental Medicine is a necessary prerequisite for student's admission in the fifth semester. This kind of landmark barrier implies the confirmation of the student's gradually accumulated knowledge in the biomedical and preclinical fields, that is necessary for the beginning of the valid study of clinical, first and foremost – sectorial disciplines. However, in the first and fourth semesters, a student (with academic debt) may repeat/study the "failed" course only until the end of the established stage barrier.

Problem-Based Learning (PBL):

Learning through the **experience** – when passing the educational program for dental medicine, the mentioned process in preclinical cycles can be achieved through development of practical skills and accumulation of experience in simulated learning environment, while in clinical cycles this experience might be used at chair-side in dental clinics and bed-side at

maxilla facial departments. Learning through the experience includes the several phases/stages:

- Practical and clinical experience - describe the experience, describe what happened;
- Feelings – what students think and feel about;
- Evaluation - what is good and what is bad in gained experience and accumulated information;
- Experience analysis - why this or that experience / knowledge was good or bad;
- Conclusion - what else should or shouldn't do the student to improve the learning outcomes?
- Action plan for the next experience - what will the student do if the situation repeats?

Methods, used to teach the course of Dental medicine:

- **Lecture-seminars** - Presentation, oral/verbal presentation of study material based on theoretical and actual clinical cases;
- **Involvement in discussions, debates –**discussion, reasoning, fix and justify his/her opinion, providing explanations**;**
- **Collaborative teaching**
- **Working on the book, information retrieval and processing;**
- **Written tests** – taking extensive lecture notes, preparation of theses and abstracts, working on exercises, MCQ's, illustrated tasks, medical documentation;
- **Participation/involvement in scientific research**
- **Presentation, abstract submission**
- **Laboratory training**
- **Demonstration method**
- **Case study**
- **Brainstorming**
- **Role playing** – student playing the roles of dental practitioner and/or patient
- **Development/assimilation of practical and clinical skills** - phantom-moulages, simulators, direct contact with patients at the University clinics under supervision of the professor (within the competence);
- **Teaching in the clinical environment** bed-side teaching and/or dental chair-side teaching;
- **Case based learning** (CBL) – presentation and analysis of specific clinical cases, problem analysis, teaching clinical skills and development of clinical reasoning;
- **Problem based learning** (PBL) – assimilation of the ability to resolve the problem independently;
- **Method of teaching communication skills**

Student knowledge assessment system

At Tbilisi State Medical University the learning outcomes achieved by the student in the course / discipline will be assessed on the base of midterm and end-of-course exam summary assessment scores/grading. Grading scores for studying course/discipline – 0- 100 scores.

Midterm assessment is the summary scores of knowledge assessment components (student's attendance, weekly / daily, current academic, clinical, practical and other activities) based upon the syllabus and is determined by 0- 60 scores. Final exam is graded by – 0-40 scores.

The student's learning outcomes and the general assessment procedures are defined by Law and Decree No 3 (5 January 2007) of the Minister of Education and Science of Georgia on the "Rules for Calculating Higher Educational Programs by Credits".

For obtaining permission to the final exam, the student should accumulate 51 scores, including sum from midterm assessments and final exam maximum grading points (40 scores); Assessment of the final (end-of-course) exam will be positive in case the student gets scores of 24 and more (60% and more from maximum grading points).

The training course is considered passed if the sum of positive scores of the intermediate assessment and final exam is 51 and more.

Depending on the specifics of the course, various mono- or combined methods of assessing student knowledge and practical skills are used: multiple choice questions (MCQ), oral, oral and written (MCQ and open questions, illustrated tasks), phantom component and oral, objective structured practical examination (OSPE), clinical component and oral, objective structured clinical examination (OSCE), the feedback (FB) practice is implemented as well.

Five types of positive assessment are as follows:

A - Excellent – 91-100 points

B - Very good - 81-90 points

C – Good - 71-80 points

D – Satisfactory - 61-70 points

E – Enough/Acceptable - 51-60 points

Two types of negative assessment used in the program:

(Fx) – Did not pass – 41-50 points. Considerable further work required from the student and he/she is given a chance to pass additional (secondary) exam;

(F) - Failed – 40 points and less, (meaning that the work of a student isn't enough and further work is required to learn the subject over again).

Credit transfer is possible only after achievement of learning outcomes /competencies envisaged under the syllabus and reflected by one of the above-mentioned positive assessments.

A student has the right to make up a secondary (additional) exam in the same semester; interval between the final and secondary exam should be not less than 5 days.

The student is given the right to pass secondary (additional) exam:
- In case of absent from the exam within the exam session period, regardless of the reason;
- In case of negative assessment (Fx) within the basic session period.

After completion of X semester, the student is ready to pass the unified integrated terminal exam. Final (terminal) exam is graded by - 0-40 scores. Content -related issues of the exam is composed of thematic topics derived out of all study courses of specific clinical discipline cycles, in proportion to the credit volumes during passing the program. The examination is conducted at TSMU examination center by testing (MCQ) in exam software format. Examination topics/ sub-topics are available on the TSMU website and are well known for the students. The examination MCQ tests are composed of these topic/ sub-topics.

Integrated examination includes the study courses, taught in the X semester:
- *Clinical Operative odontology and Clinical endodontics* - 7 credits;
- *Children and adolescent Oral and maxillofacial surgery* - 3 credits;
- *Maxillofacial surgery 4 and implantology* - 6 credits;
- *Orthodontics 4* - 3 credits;
- *Clinical Prosthodontic Dentistry 2* - 6 credits.

For permission to pass the integrated terminal exam it is necessary to overcome the midterm assessment barrier, so called pre-examination barrier in all involving curriculum courses.
The principle consists in the following: for obtaining permission to pass exam the student shall accumulate 51 scores after summarizing midterm assessments and final exam (40 scores) maximum scores. Failing to fulfil pre-requisites prior to the integrated terminal exam even for one of the study courses is a contraindication for permission to the exam. In this case, the student is obliged to study /repeat all "integrated" courses over again.
Integrated midterm assessment (scores ranging from 0 to 60) scoring algorithm, taking into account the midterm assessment of each discipline and its credit-volume, as follows:

- Midterm assessment scores allocated to the student for each study course within the integrated examination should be multiplied on the credit-volume of this course;
- Summed up midterm assessments obtained in all the training courses of the integrated examination are multiplied by the credit-volume of this course;
- Calculated (summed up) assessment shall be divided on the total credit-volume of all curriculum courses;
- The obtained quantitative indicator is the midterm assessment of the courses included in the integrated examination block that further will be summarized with the examination assessment scores; the sum obtained is considered as the final assessment of the integrated terminal exam.

Within the frames of consultation meetings, the student will be able to get information (during the program implementation or after the exam) on strengths and weaknesses of the tasks performed by him/her, as well as the recommendations, to improve the learning outcomes.

Student's progress (achievements) might serve as the indicator of the methods and forms used for achieving the learning outcome. Analysis of the results obtained by students at the end-of-every terminal exam will help to improve the teaching process.

Human resources necessary for program implementation

In the program implementation participate: academic staff of Tbilisi State Medical University selected by the competition, invited specialists and teachers.

Material resources necessary for program implementation

The material-technical base of the Tbilisi State Medical University, with its appropriate inventory and information-communication facilities, conference halls, training laboratories, academic and simulation classes, as well as Clinical Skills Center, Scientific-Research Skills Center used to achieve learning outcomes envisaged by the educational program for the Doctor of Dental Medicine; the library rich in book-resources, 84 computers and 17 laptops connected to the Internet. The library has automated systems of Koha and Dspace and access to the databases such as: EBSCO, BioOne, Royal Society Journals Collection, Cambridge University Journals, Edward Edgar Publishing Journals and Development Studies e-books; WHO software - Research4life has access to electronic databases of HINARY, AGORA, OARE and ARDI; Free Access to the electronic bases of Elsevier - Science Direct and Scopus is provided by the Rustaveli Scientific Foundation.

The Faculty of Dentistry (Stomatology) has own 5 (five) high-tech clinical bases, as well as, affiliated clinics, staffed with highly qualified specialists:

- TSMU Apolon Urushadze Dental Clinic
- TSMU #1 Dental Clinic
- TSMU #2 Pediatric Dental Clinic
- TSMU G. Zhvania Pediatric Academic Clinic
- TSMU First University Clinic
- TSMU and Ingorokva high technology University Clinic, LTD

Attachment 1.2 - Map of outcomes

Attachment 1.3 Map of the program aims and learning outcomes

Head of the Program

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