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**TBILISI HUMANITARIAN TEACHING UNIVERSITY**

**SILLABUS**

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| ***Name of educational course*** | ***Clinical endodontics*** |
| ***Code of educational course*** | *STOM0404DM* |
| ***Status of educational course*** | *Compulsory course*  *for the one-cycle higher educational Programme-Dentistry* |
| ***ECTS*** | ***4 credits. Total: 100 hours***  *Contact Hours–46 hours (Class Meeting Time Period: 15L/27 Pr) + 4 hours (Midterm:2h and Final Examinations 2h):*  *Individual Work-54 hours* |
| ***Lecturer*** | *LikaElisbarashvili, THTU invited lecturer,*  *593510005*  *Consultation days: according to consultation schedule* |
| ***Goal of educational course*** | *The goal of the course is teaching the students the techniques of Clinical endodontics; to develop the clinical thinking skills, skills to draw conclusions based on clinical picture and additional examination, and subsequently to select the right direction of treatment.* |
| ***Precondition for admission*** | *Clinical odontology* |
| ***System of students’ assessment*** | ***The assessment system allows:******A) Five types of positive assessment:*** *a.a)* ***(A) Excellent*** *- 91-100 points of the assessment;*  *a.b)* ***(B) Very good*** *- 81-90 points from maximum marks;*  *a.c)* ***(C) Good*** *- 71-80 points from maximum marks;*  *a.d)* ***(D) Satisfactory*** *- 61-70 points from maximum marks;*  *a.e)* ***(E) Sufficient*** *- 51-60 points from maximum marks.*  ***B) Two types of negative assessment:***  ***b.a) (FX) Did not pass*** *- 41-50 points from maximum marks, which means that a student needs harder work to pass and is granted one additional attempt with independent work;*  ***b.b) (F) Fail-*** *40 points and less from maximum marks, which means the performance a student is not sufficient and he/she has to learn the subject from the beginning.*  *Bb) (F) - Fifty points and less than maximum score, which means that the work performed by the student is not enough and he has to learn the subject from the beginning.  1. In case of one of the negative assessments: (FX) Did not pass, the Teaching University shall appoint an additional exam within at least 5 days after the final exam results are announced and reflected in the exam table. 2. The assessment received at the additional exam is the student's final assessment, which does not reflect the negative points received at the basic final exam. If the student receives at the additional exam from 0 to 50 points, (F) -0 score will be recorded in the student’s final examination record list.*  ***The assessment system at the Tbilisi Humanitarian Teaching University is divided into the following components:*** *Out of the total score (100 points) the intermediate assessment makes totally 60 points that are distributed as follows:* ***A student’s activity during the educational semester*** *-30 points;* ***Intermediate exam*** *- 30 points;* ***and the final exam*** *- 40 points. The limit of minimum competence in the component of intermediate assessments totals at least* ***18 points.*** *The limit of minimum competence of the final assessment is* ***50%*** *of the total sum of the final assessment, i.e.* ***20 points out of 40 points.*** |
| ***Content of educational course*** | *See Appendix 1* |
| ***Assessment forms/methods/***  ***criteria/activities*** | *Activity - 30 scoring points. Assessed during the current verbal survey during the supervision 6 times, each assessment 3 scoring points, maximum - 18 scoring points*  *Assessment criteria:*  *3 scoring points: A student prepared a complete material, he/she answers the questions comprehensively, speaks logically, actively uses information from reviewed material and is interactive.*  *2 scoring points: A student prepared the material fairly well, he/she answers the questions comprehensively, he/she cannot make analysis and integrate to the material reviewed.*  *1 scoring point: The student has prepared material, but answers the questions incompletely.*  *0 scoring point: The student is not prepared. He/she is not able to answer the questions.*  ***Discussion - 2 scoring points***  ***Assessment criteria:***  *2 scoring point: A student is well prepared, he/she is able to express his/her own opinion around the discussion topic, to organize and hold debates, identification of opposition and logical mistakes in the reasoning of participants, assessment of discussion products.*  *1 scoring point: A student is not prepared well, he/she is able to express his/her own opinion around the discussion topic, to organize and hold debates, identification of opposition and logical mistakes in the reasoning of participants, assessment of discussion products.*  *0 scoring point: A student is prepared, but he/she does not take part in the discussion.*  ***The discussion of the clinical case - 5 scoring points It is held during the supervision twice.***  *Analysis of the case*  *4-5 - a student analysis the clinical case and makes justified differential diagnose*  *2-3 - a student analysis the clinical case but hardly makes the analysis of the latter*  *1-2 scoring point - the student is not able to analyze the case*  *0 - a student is not able to analyze the case*  ***Preliminary quiz is combined:***  *It is performed in the form of testing - maximum scoring points 30, there are 25 test tasks, each correct answer is praised by 1 scoring point, and the incorrect answer - 0 scoring point.*  ***The discussion of the clinical case - 5 scoring points***  *4-5 - a student analysis the clinical case and makes justified differential diagnose*  *2-3 - a student analyses the clinical case but hardly makes the analysis of the latter*  *1-2 scoring point - the student is not able to analyze the case*  *0 - a student is not able to analyze the case*  ***The final exam: combined***  *It is conducted in the written (test) form.*  *The test consists of 30 closed questions, maximum - 30 scoring points, for each question there are four answers given, and among them only one answer is correct.*  *The correct answer shall be circled around.*  *Each correctly circled test shall be assessed by 1 scoring point,*  *Each incorrectly circled /marked/non-filled test shall be assessed by 0 scoring point.*  ***2 The discussion of the clinical case - 10 scoring points.***  *4-5 - a student analysis the clinical case and makes justified differential diagnose*  *2-3 - a student analysis the clinical case but hardly makes the analysis of the latter*  *1-2 scoring point - the student is not able to analyze the case*  *0 - a student is not able to analyze the case* |
| ***Mandatory literature*** | 1. *NishaGarg /Textbook of ENDODONTICS, 2014* 2. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010* |
| ***Additional***  ***literature*** |  |
| ***Study results. Field competences*** | ***Knowledge***   1. *Student classifies of pulpal pathologies and Etiophatology of pulpal disease.* 2. *Student describes type of pulpitis, its etiology and histopathology* 3. *Student discusses about Calcific, Atrophic and Fibrous defeneration*   ***Skills***   1. *Student applies modern approaches to make plan of treatment of pulpitis and periodontitis* 2. *Student selects the methods and materials for Obturation of root canal system* 3. *Student evaluates of Success of Endodontic Treatment* 4. *Student makes judgment about Selection for Endodontic Retreatment*   ***Responsibilities***   1. *Student defines of topics for further education.* |
| ***Teaching methods and forms*** | *Lecture*  *Clinical practice*  *Discussion / debates*  *Critical Reflection*  *Situated Learning*  *Role Play*  *Storytelling* |

***Appendix 1***

***Content of educational course***

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| ***days*** | ***Teaching method*** | ***Number of hours*** | ***Topic of practical or laboratory training of Lecture/work in the working group*** | ***Literature*** |
| ***I*** | ***Lecture*** | *2* | *Classification of pulpal pathologies and Etiophatology of pulpal disease.*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.22-26*** 2. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 76-82* |  |
| ***Practical training\ Seminar*** | *1* | *Syllabus presentation* |  |
| ***II*** | ***Lecture*** | *1* | *Reversible* *pulpitis. Etiology, histopathology, diagnosis and differential diagnosis.*  *Irrivirsable pulpitis Etiology, histopathology, diagnosis and differential diagnosis.*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.27-30*** 2. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 83-87* |  |
| ***Practical training\seminar*** | *2* | * *Classification of pulpitis* * *Physical factors in the development of pulpitis* * *Chemical factors in the development of pulpitis* * *Bacterial factors in the development of pulpitis* |  |
| ***III*** | ***Lecture*** | *1* | *Chronic pulpitis. Etiology, histopathology, diagnosis and differential diagnosis.*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.31-32*** 2. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 89-90* |  |
| ***Practical training\seminar*** | *2* | * *Etiology, histopathology, signs and symptoms diagnosis and differential diagnosis of riverseble and irreverseble pulpitis* |  |
| ***IV*** | ***Lecture*** | *1* | *Pulp necrosis. Pulp degeneration*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.34-35*** 2. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 93-95* | *1/2/3* |
| ***Practical training\seminar*** | *2* | * ***Chronic alcerative pulpitis-etiology, signs and symptoms, histophatology, diagnosis and differential diagnosis*** * ***Chronic hyperplastic pulpitis- etiology, signs and symptoms, histophatology, diagnosis and differential diagnosis*** |  |
| ***V*** | ***Lecture*** | *1* | *Who classification of periradiculardisease .*  *Acute apical periodontitis. Etiology histopathology,sighs and symptoms, diagnosis, differential diagnosis*  *Acute apical abscess. Etiology histopathology,sighs and symptoms, diagnosis, differential diagnosis*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.36-40*** 2. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 98-100* |  |
| ***Practical training\seminar*** | *2* | *Issues should be* *discussed*   * *Calcific defeneration* * *Atropic degeneration* * *Fibrous degeneration* * *Pulp artifacts* * *Tumor metastasis* * *Necrosis of pulp, etiology, histopathology ,diagnosis,differential diagnosis* |  |
| ***VI*** | ***Lecture*** | *1* | *Chronic Apical periodontitis. Etiology histopathology, diagnosis,differential diagnosis*  *Chronic alveolar abscess - Etiology histopathology, diagnosis,differential diagnosis*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.47-48*** 2. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 107-111* |  |
| ***Practical training\seminar*** | *2* | *Issues should be discussed*   * *Etiology histopathology,sighs and symptoms, diagnosis, differential diagnosis of Acute apical periodontitis.* * *Etiology histopathology,sighs and symptoms, diagnosis, differential diagnosis of Acute apical abscess.* |  |
| ***VII*** | ***Lecture*** | *1* | *Cystic apical periodontitis /Radicular cyst , Etiology histophatology symptoms diagnosis, differential diagnosis*   1. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 114-120* |  |
|  | ***Practical training\seminar*** | *2* | * *Etiology histopathology, diagnosis,differential diagnosis of Chronic Apical periodontitis* * *Etiology histopathology, diagnosis,differential diagnosis of Chronic alveolar abscess* |  |
| ***VIII*** |  | *2* | *Intermediate exam* |  |
| ***IX*** | ***Lecture*** | *1* | *Treatmentplanning of pulpitis and periodontitis*   1. *Mahmoud Torabinejad/Endodontics Principles and Practice,2009 Pp 68-92* |  |
| ***Practical training\seminar*** | *2* | * *Etiology histophatologysymptoms diagnosis, differential diagnosis of Radicular cyst* |  |
| ***X*** | ***Lecture*** | *1* | *Treatment of pulpitis and periodontitis*   1. *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 86,88,90,92* |  |
| ***Practical training\seminar*** | *2* | *Issues should be discussed*   * *Treatment planning* |  |
| ***XI*** | ***Lecture*** | *1* | *Obturation of root canal system*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.282-305*** | *1/2/3* |
| ***Practical training\seminar*** | *2* | *Issues should be discussed*  *Treatment of reversible and irreversable pulpitis*  *Treatment of chronic pulpitis*  *Treatment of acute and chronic periodontitis* |  |
| ***XII*** | ***Lecture*** | *1* | ***Obturation tecnques of root canal system***   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.306-323*** | *1/2/3* |
|  | ***Practical training\seminar*** | *2* | *Issues should be discussed*   * *Timing of Obturation ;* * *Extent of Root Canal Filling;* * *Materials used for Obturation ;* * *Methods of Sealer Placement;* * *Obturation Techniques;* * *Armamentarium for Obturation;* * *Lateral Compaction Technique;* * *Variation of Lateral Compaction Technique* |  |
| ***XIII*** | ***Lecture*** | *1* | *Endodontic Failures and Retreatment*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.345-365*** |  |
|  | ***Practical training\seminar*** | *2* | *Issues should be discussed*   * *Vertical Compaction Technique;* * *System B:* * *ContinuousWave of Condensation Technique;* * *Lateral/Vertical Compaction of Warm Guttapercha;* * *Sectional Method of Obturation/Chicago Technique;* * *ThermoplasticizedInjectable Gutta-percha Obturation;* * *Solid Core Carrier Technique;* * *Obturation with Silver Cone;* * *Apical Third Filling* |  |
| ***XIV*** | ***Lecture*** | *1* | *Bleaching of discolored teeth*   1. *NishaGarg /Textbook of ENDODONTICS, 2014****Pp.492-502*** | *1/2/3* |
|  | ***Practical training\seminar*** | *2* | *Issues should be discussed*   * *Evaluation of Success of Endodontic Treatment ;* * *Causes of the EndodonticFailures ;* * *Case Selection for Endodontic Retreatment;* * *Steps of Retreatment* |  |
| ***XV*** | ***Lecture*** | *1* | *Lasers in Endodontics*  *B. SurashChandra , V. Gopi Krishna/Grossman’s Endodontic Practice,2010 Pp 460-467* | *1/2/3* |
|  | ***Practical training \Seminar*** | *2* | *Issues should be discussed*   * *Classification of Discoloration ;* * *Bleaching;* * *Contraindications for Bleaching;* * *Bleaching Agents;* * *Home Bleaching Technique/Night GuardBleaching ;* * *In-Office Bleaching ;* * *Bleaching of Nonvital Teeth;* * *Effects of Bleaching Agents on Tooth and its Supporting Structure  Presentation* |  |
| ***XVI-XVII*** |  | *2* | ***Final*** |  |
| ***XVIII-***  ***XIX*** |  |  | ***Additional exam*** |  |