**BSc Dental technician**

**Course Syllabi**

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| **Course** | **Orthodontic Appliances 1** | | | |
| Type | Semester | ECTS | Code |
| OBLIGATORY (O) | 3 | 6 | 18 |
| **Course Lecturer** | Prof. Asst. Dr. Miranda Sejdiu Abazi | | | |
| **Course Assistant** | Dr. Sc. Jeta Kiseri Kubati, Dr. Spec. Vesel Rrustemaj, Dr. Spec. Donika Peci | | | |
| **Aims and Objectives** | The objective of this course is to familiarize students with the various developmental stages of the face, skull, and occlusion. Additionally, the course will cover the classification of orthodontic appliances and principles of orthodontic treatment. Students will gain an understanding of the construction of orthodontic appliances and their practical application. | | | |
| **Learning outcomes** | Upon successful completion of this course students should be able to:   * **1.** To know the principles of construction of orthodontic appliances as well as the use of specialized terminology; * **1.1** They will know the classification of occlusion and orthodontic appliances, the indications and contraindications of orthodontic treatment, as well as the stages of construction of orthodontic appliances * **2**. Build different orthodontic appliances, know their advantages and disadvantages, know how to distinguish orthodontic treatment in children and adults, and to be able to interpret the doctor’s treatment plan; * **2.1** To select and use materials, devices and work instruments in accordance with the nature of the work, respecting the instructions, requriements for safety measures and environmental protection; * **3.** To bend different wires; * **3.1** To have knowledge about the application of orthodontic appliances in the oral cavity, as well as their adaptation and maintenance. * **3.2** Describe the construction process of the finished device; | | | |
| **Alignment of Course’s Learning Outcomes to Programs’ Learning Outcomes.** | 1. **Application of terminology in practice**     * BSc Program (Outcome 2, 5): Lectures provide theoretical knowledge in dental sciences, and this leads in allowing students to apply this knowledge in practice    * Communication courses and oral presentations improve written and verbal proficiency 2. **Evaluation of requirements in producing orthodontic appliances**:    * BSc Program (Outcome 3, 6): Laboratory sessions provides hands-on experience    * Material selection workshops offer practical experience. 3. **Practical Skill Development**:    * BSc Program (Outcome 8, 10, 11, 12): Includes technology courses and workshops which demonstrate the use of technology    * Practical sessions and production labs guide students in producing orthodontic appliances.    * Practical sessions demonstrate repair procedures    * Collaboration with dental professionals in clinical settings | | | |
| **Course Content** | **Course Plan** | | | **Week** |
| Definition, tasks and goals of the course  The psychological and socio- economic importance of orthodontics | | | 1 |
| The history of orthodontics | | | 2 |
| The characteristics and importance of taking impresions in orthodontics,  The importance of creating study models  The instruments used for the analysis of study models | | | 3 |
| Diagnostic methods and treatment plan in orthodontics  Tooth extraction for orthodontic reasons  X- ray analysis in orthodontics | | | 4 |
| Normal occlusion- ideal occlusion and articulation | | | 5 |
| Abnormalities of teeth and jaws.  Orthodontic anomalies;  Classification;  Abnormalities of the teeth in particular;  Abnormalities of the tooth position | | | 6 |
| Quizzes | | | 7 |
| Abnormalities of teeth and jaws.  Anomalies of the number, shape, size and development of the toorth structure. | | | 8 |
| Abnormalities of teeth and jaws.  Abnormalities of dental arches. | | | 9 |
| Malocclusions in the sagittal, transverse and vertical planes | | | 10 |
| Etiology of malocclusions – local etiological factors of malocclusions. | | | 11 |
| Etiology of malocclusions – general etiological of malocclusions. | | | 12 |
| Craniofacial anomalies and reletad defects with birth. | | | 13 |
| Presentation of seminars | | | 14 |
| Final assessment | | | 15 |
|  | **Laboratory practices** | | | **Week** |
|  | Development of decidues teeth, permanent dentition and eruption chart of permanent teeth | | | 1 |
|  | The physiology of tooth movement | | | 2 |
|  | Taking impresions and creating study models | | | 3 |
|  | Physiological occlusion | | | 4 |
|  | Maloclussions | | | 5 |
|  | Classification of orthodontic anomalies according to Angel classification and their etiology | | | 6 |
|  | Quizzes, Projects | | | 7 |
|  | Line orientation in orthodontics and three dimensional analysis in the horizontal, vertical and sagittal plane | | | 8 |
|  | Analysis of study models according to the authors: Pont, Korkhaus, Schmuth and Schwarz | | | 9 |
|  | X- ray analysis in orthodontics  (Orthopantomogram) | | | 10 |
|  | Creation of study models, fixation in occludator and articulators | | | 11 |
|  | Creating active components of mobile orthodontic appliances | | | 12 |
|  | Creating passive components of mobile orthodontic appliances | | | 13 |
|  | Constructing activators and bionators | | | 14 |
|  | Practical exam | | | 15 |
| **Teaching/**  **Learning**  **Methods** | **Teaching/Learning Activity – Weights (%)** | | | |
| These methods are carefully crafted to ensure that students develop a deep understanding of orthodontic appliances principles while simultaneously honing practical skills. | | | |
| **1. Lectures: 20%**   * + Purpose: A strong theoretical framework is crucial for understanding course material – Orthodontics.   + Relevant for: Weekly lectures cover extensive course content. The lectures are delivered with utmost clarity and precision, making it easier to grasp the complex concepts of the course. | | | |
| **2. Lab skills ( Hands-on) 35%**   * + Purpose: To apply theoretical knowledge to practical, in producing orthodontic appliances.   + Relevant for: It lets students apply theory practically, develop skills, and gain real world experience. Lab work prepare students for future careers by helping them acquire both theoretical knowledge and practical experience. | | | |
| **3.Presentation of seminars 10%**   * Purpose: Collaborative learning. * Relevant for: Scheduled sessions for presentation of seminars | | | |
| **4. Discussions in group: 10%**   * + Purpose: Discussing the latest forefront of orthodontic industry.   + Relevant for: By sharing experiences and insights in group, students can learn from one another and gain a deeper understanding of the latest developments in orthodontics. | | | |
| **5.Guest lectures and Workshops**: **10%**   * Purpose: Attending guest lectures and workshops is another excellent way to gain exposure to external expertise and new advancements in orthodontic field. * Relevant to: Experienced guest speakers   Occasional Workshops offer opportunities to learn new skills and techniques from experienced practitioners, and stay up-to-date with the latest industry trends | | | |
| **6. Homework, E- learning 15%**   * Purpose: Student should prepare next lab sessions and their task is to access Moddle to review the previous lecture’s lesson. Utilize these resources maximizes learning experience from home. * Relevant to: Access to online resources | | | |
| **Total** | | | **100 %** |
| **Assessment**  **Methods** | **Assessment Activity – Weights (%)** | | | |
| **1. Lectures - Written Examinations: (20%)**   * + Purpose: To assess understanding of key concepts, theories, and frameworks in orthodontics, and application of theoretical knowledge in laboratory settings   + Assessment method: Written examination- Evaluating knowledge and the ability to recall and explain core principles of producing orthodontic appliances. | | | |
| **2. Practical Assessment- hands on: (35%)**   * + Purpose: To assess the application of practical knowledge.   + Evaluation of every lab session each week.   + Course grades will be determined based upon student performance on dental lab   + Students must build 3 removable orthodontic appliances in the lab.   + Practical assessment evaluate student ability to perform laboratory procedures independently.   + Practical assessments involve the production of orthodontic appliances, which should meet professional standards.   + Practical assessment require student to perform their skills in making orthodontic appliance repair. During these assessments, the quality and effectiveness of the repairs are evaluated to ensure that the students have a solid understanding of the techniques required to perform these tasks in a professional setting. | | | |
| **3. Presentation of seminars: (10%)**   * + Purpose: Organizing thoughts for a presentation improves writing skills, while delivering presentations boosts confidence and communication skills.   + Assessment method: Oral presentation and written assessments like essays | | | |
| **4. Group discussion: (10%)**   * + Purpose: To assess in-depth research skills and critical analysis in the latest research of orthodontics   + Group discussions lead to better outcomes. Are collaborative processes that generate new ideas, solve problems, and improve communication skills.   + Assessement method: participation in discussion and presentation of their work. | | | |
| **5. Guest learning (10%)**   * Purpose: Guest learning involves inviting experts to share their knowledge with learners, providing unique perspectives and practical insights. Guest learning is effective in supplementing traditional learning methods and providing a more comprehensive learning experience. * Assessment method – reflective journal | | | |
| **6. Homework, E- learning (15%)**   * Assignments reletad to E-learning uses digital technologies to deliver educational content and facilitate interactive learning. * Includes quizzes, videos etc. | | | |
| **Total** | | | **100%** |
| **Course Resources** | **Means** | | | |
| **1. Textbooks and other supporting material**:   * + Effective studying materials should be relevant, accurate, and up-to-date to ensure learners are equipped with the most current information, like:   + Textboks   + Journals   + Lecture notes   + Online articles   + Videos   + Multimedia resources | | | |
| **2. Dental lab, lab equipment and materials**   * The dental laboratory with all equipment and materials offers perfect conditions for excellent practical work for dental technichian | | | |
| **3. Class**:   * + Illustrate practical applications of theories in real-world scenarios. | | | |
| **4.Computer and Projector:**   * Video * Webinars and workshops | | | |
| **ECTS Workload** | **Activity type** | |  |  |
| 1. Lectures | | 30 h | 20% |
| 1. Dental lab | | 60 h | 35 % |
| 1. Group Discussions and Seminars | | 20 h | 10 % |
| 1. Presentation | | 20 h | 10 % |
| 1. Guest Learnning | | 20 h | 10% |
| 1. Individual learning | | 30 h | 15% |
| **Total** | | **180 h** | **100.0 %** |
| **Literature** | * 1. Federico V. Tenti. Atlas i aparateve ortodontike fikse dhe të lëvizshme: Si dhe pse t'i zgjedhim të gjitha teknikat për të gjitha filozofitë. Prishtinë, 2004. * 2. Tony Johnson, David G. Patrick, Christopher W. Stokes, David G. Wildgoose, Duncan J. Wood. Basics of Dental Technology. A Step by Step Approach. Wiley Blackwell 2016. * 3. Milan Markovic-Ortodncija izdavac ortodontska sekcija Srbije * 4.Clinical Orthodontics-Current concepts, goals and mechanics (2nd Edition) | | | |
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**Pre-requirements for the course**

This course has no pre-requirements.

**Assessment of Competence**

For the class to reach a bachelor’s level of learning, students must prepare by reading the given material, complete all assignments for each class. Students will be evaluated for participation as:

* Full participation in class activities and group work.
* Participation in class discussions (without dominating the conversation).
* Demonstrating understanding of the content of the material read.
* Providing critical thinking about the subject matter.
* Adding ideas to class discussion.
* Helping others clarify an idea.
* Supporting others as they share their ideas and speak in class.
* Raising new ideas and questions.
* Arriving on time and staying throughout the lesson.

**Participation policy**

Students are expected to attend all lectures and exercises. The importance of class attendance is reflected in the percentage of the grade associated with attendance. You cannot receive attendance grades if you are not in class. If you have an emergency and cannot attend class, please email me in advance to let me know. Class will start on time to honor everyone's commitment. If you are late, please enter the classroom quietly. Participation marks will be deducted for lateness.

**Students must be present at least 70% of the activities.**

**Rules and Regulations**

**Attendance**

UBT College undertakes the responsibility of training future dental technician, to the highest standards. One of these standards is taking responsibility for personal actions. If a student misses a particular session, the student has lost that instruction forever. They can never be repeated. When a student is late to class, the entire class is interrupted. Such interruptions will not be tolerated. Students have a responsibility and a contract to stay in class for the duration of the sessions, for each day. Students who leave sessions early, even if they leave with permission, cause disciplinary problems that will not be tolerated.

You made a contract with the UBTs to be in class and attentive throughout the learning process. Every student must be in every session, every day that is scheduled, throughout the semester.

All teaching sessions begin at their designated times in the lesson timetable. All sessions start and end at designated times in the class schedule. Any student who leaves the class session early will be considered absent

**Electronic Devices**

It is distracting to everyone in the classroom when cell phones ring during class. This is even worse if it happens during a test or quiz. Since this is a classroom and not a room for listening and/or viewing electronic devices such as smart phones, personal laptops and/or other electronic devices will not be allowed.

The classroom will be a cell phone free zone. If you must bring a cell phone to class, it must be turned off or set to vibrate. It is distracting for a classroom to have students constantly answering cell phones during class. If you absolutely must answer the call, leave the classroom. A student who accepts calls during class will be asked to leave class. Hearing devices will not be allowed in the classroom for any reason.

**Tests And Quizzes**

Tests and quizzes are usually scheduled at the beginning of the lesson. Tests and quizzes are one-way teachers measure a student's knowledge. Failure to participate in tests or quizzes interferes with this process. UBT College does not reward students who do not take their tests or quizzes on time; therefore, the teacher cannot allow students to take tests or quizzes after the deadline.

Tests and quizzes must be taken by each student, any student who asks for help or helps other students during a test or quiz will be removed from the test and will be graded zero for that test or quiz. It is the student's responsibility to prepare for tests and quizzes at all times. It is the student's responsibility to know when there are tests or quizzes to take.

**Seminars and Projects**

Seminars and projects must be done on the student's own time, not during class.

Never allow another student to copy your seminars and projects.

Never copy another student's seminars and projects.

**Due Dates**

One thing all professionals must learn is to be on time. Excuses do not make the student and teacher feel better about their wasted time. For all assigned tasks, sufficient time is given to complete, and all work must be completed in the time set by the teacher. **No delay in the completion of the works will be accepted**.

**Proper Attire**

Professionals must dress appropriately. Any student who does not dress appropriately during class time will not be allowed to participate in class activities.

**Conduct**

Students at UBT College must learn to work in groups, regardless of group composition. Tolerance, courtesy, respect, and a peaceful environment are required in the classroom.

All students are expected to be respectful to other students and to the teacher during class and in dealing with class matters. Disrespectful behavior will affect your participation grade. Examples of respectful behavior in the classroom include, but are not limited to:

* Listening to each other and exchanging ideas.
* Arrival and departure according to the class schedule, except in cases of emergency.
* Turn off the cell phone ringer and do not receive calls in class.
* Speak so that others can hear and understand what you are saying.
* Engaging in class discussion (avoiding side conversations during class and dominating class discussion).
* Listening (not speaking) when the teacher or other students are addressing the class.
* Working collaboratively with a specific or selected group.
* Completion of class work on time.
* Focusing on class topics and not on personal matters or work unrelated to the class.
* Viewing your computer and/or cell phone only when related to class work.
* Raising questions when there is no clarification about the work in class.

**Academic Dishonesty**

Violations of Academic Integrity include, but are not limited to, the following actions:

* Cheating on an exam.
* Plagiarism.
* Working together on an individual assignment, paper, or project when the instructor has specifically stated students should not do so.
* Submitting the same term paper to more than one instructor or allowing another individual to assume one’s identity for the purpose of enhancing one’s grade.