DESCRIPTION FORM OF THE COURSE	
Course Code and Name	**DHF 470 Orthodontics**
Semester of the Course	7-8
Catalog Description of the Course (Contents)	Detecting anomalies using orthodontic diagnostic tools, distinguishing the etiology of anomalies and learning treatment options, performing simple orthodontic procedures
Main Reference Book	-Ülgen M. Ortodontik tedavi prensipleri. Ankara Üniversitesi Basımevi, Ankara, 2003. -Proffitt WR, Fields HW, Sarver D. Contemporary Orthodontics. 5th ed. Mosby, Elsevier 2013.
Supplementary Books	-Graber T.M, Vanarsdall R, Vig K: Orthodontics Current Principles and Techniques, 4 th ed. Mosby., 2005 -McNamara JA, Brudon WL. Orthodontic and Orthopedic Treatment in the mixed dentition. Needham Press, Michigan, 1993 -Moyers R.E: Handbook of orthodontics. 4th ed. year book Medical Publishers,1980 -Graber TM, Neumann B. Removable orthodontic appliances. WB Saunders, London, 1977. -Graber TM, Rakosi T,Petrovic AG. Dentofacial orthopedics with functional appliances (Activator-Bionator-Frankel). Mosby, 1985.
Course Credit (AKTS)	6
Prerequisites of the Course (Course attendance requirements should be specified in this section)	It is mandatory to be successful in the DHF 370-Orthodontics course. It is compulsory to complete the clinical applications and evaluation stages (clinical internship apparatus and homework) in order to take the final exams of the course. The final exam consists of two stages (Practical + Theoretical) It is compulsory to enter both stages in order to create a success grade. Attendance to the theoretical and clinical applications of the course is mandatory.
Course Type	Vocational / Technical Course
Language of Instruction of the Course	Turkish
Objectives and Goals of the Course	To be able to diagnose orthodontic anomalies by using orthodontic diagnostic tools and clinical examination findings, to be informed about the treatment plan, to be able to perform simple orthodontic applications, to follow the oral, tooth and jaw development of individuals in the developing age and to have the knowledge to direct the patient to the orthodontist at the appropriate time.
Learning Outcomes of the Course	1. Learns the orthodontic diagnostic tools. 2. Can diagnose the orthodontic anomalies via orthodontic diagnostic tools. 3. Differentiates the etiology of the orthodontic anomalies. 4. Knows the detailed orthodontic clinical exam . 5. Can diagnose the orthodontic anomally. 6. Able to determine the orthodontic treatment need. 7. Able to use the findings of the clinical exam for orthodontic treatment plan.

	8. Knows the patient who needs orthodontic treatment and has an adequate knowledge in planning orthodontic treatment and determinig the exact time to refer the patient to an orthodontist. 9. Follows up the dental and skeletal development of growing patient and if necessary refers the patient to an orthodontist. 10. Has knowledge about orthodontic treatment techniques . 11. Can bend wire on orthodontic model. 12. Able to do simple orthodontic applications(taking impression, stripping and ligation) . 13. Has knowledge about model analysis, basic cephalometric analysis. 14. Can plan, achieve the application and adjustment of the space retainer, removable appliance for one tooth movement and crossbite of one tooth. 15. Can realise the change in oral health of the orthodonİc patient and assess the oral hygiene and tooth decay development.
Format of the Giving Course	It is carried out face-to-face theoretical and clinical practice training.
Weekly Distribution of the Course	1. **week** 1.Diagnosis in orthodontics and the importance of diagnostic tools. 2.Using the symptoms of clinical examination in orthodontic treatment plan 2. **week** 3.Functional Analysis 4.Functional Analysis 3. **week** 5.Growth stages and orthodontic applications 6.Introduction to the orthodontic treatments and the classifications of the orthodontic applications 4. **week** 7.Preventive orthodontic applications(primary dentition) . 8.Preventive orthodontic therapy (early mixed dentition). 5. **week** 9.Guidance of the eruption with extraction (serial extraction). 10.Guidance of the eruption without extraction and Guidance of the eruption in congenital tooth agenesis. 6. **week** 11.Removable space retainers, fixed space retainers .12.Introduction to interceptive orthodontic therapy and the effects and reasons of habits. 7. **week** 13.Effects of abnormal tongue functions, reasons, treatment principles and interceptive treatment of it. 14.Thumb sucking, oral breathing habits and myofunctional therapy. 8. **week** 15.Effects, reasons and interceptive therapy of lip sucking. 16.Orthodontic tooth movement and response of the supporting tissues. 9. **week** 17.Orthodontic tooth movement and response of the supporting tissues . 18.ntroduction to corrective orthodontic therapy and anchorage in orthodontics. 10. **week** 19.Sources of force . 20.Sources of force . 11 **week** 21.Methods of gaining arch length. 22.Methods of gaining arch length. 12. **week** 23.Methods of gaining arch length. 24.Methods of gaining arch length. 13. **week** 25.Dental anterior crossbite and the treatment, Crossbite(one or more anterior teeth crossbite), Application of removable orthodontic appliances (correction of crossbite of one and more anterior teeth). 26.Application of removable orthodontic appliances (correction of one or more teeth) Removable orthodontic appliances with screw and canine retractor. 14. **week** 27.Application of Functional jaw orthopedics 28.Application of Functional jaw orthopedics ? Class 2 15. **week** 29.Applications of Extraoral orthodontic appliances . 30.Application of Headgear.

16. **week** 31.Application of Functional jaw orthopedics ? Class 3
32 .Application of Orthopedic facemask.
17. **week** 33.Application of Chincup.
34.Orthodontic rapid maxillary expansion, Orthodontic slow maxillary expansion, Application of removable orthodontic appliances (correction of multiple posterior teeth)
18. **week** 35.Diastema, Orthodontic space preparation for preprothetical purposes in case of congenital or acquired missing teeth, Orthodontic space preparation for missing teeth.
36.Deepbite orthodontic therapy.
19. **week** 37.Orthopedic treatment of Skeletal Openbite .
38.Orthopedic treatment of Skeletal Openbite .
20. **week** 39.Fixed orthodontic treatment applications .
40.Fixed orthodontic treatment applications .
21. **week** 41. Fixed Orthodontic Treatment Application
42. Adult Orthodontics, Orthodontic Extrusion and Intrusion for Preprotetic Purposes
22. **week** 43. Preoperative Cleft Lip and Palate Apparatus Application
44.Cleft Lip and Palate Treatment Approaches in Milk and Permanent Dentition
23. **week** 45. Orthodontic Distraction Osteogenesis Applications
46. Orthodontic Relationship with TMJ and Temporomandibular joint diseases / irregularities
24. **week** 47. Evaluation of Treatment Approaches in Class 1 Malocclusions
48.Comparative Evaluation of Treatment Approaches in Class 2 Malocclusions
25. **week** 49.Comparative Evaluation of Treatment Approaches in Class 3 Malocclusions
50. Orthodontic Maintenance of Impacted Teeth
26. **week** 51. Orthodontic Maintenance of Impacted Teeth
52. Reinforcement Therapy
27. **week** 53. Orthodontic Reinforcement Apparatus Applications
54. Emergency Response of Orthodontic Appliance Related Injuries
28. **week** 55.Case Discussion
56.Case Discussion

MANDATORY CLINICAL PRACTICES (5 Weeks)

1. 1. Orthodontic model diagnosis and analysis in sample cases, Model analysis application (at least 1)
2. 2. Making wire bends on the sample model: Adams crochet, vestibule arc, drop crochet, mesio-distal mainspring, labiolingual mainspring. (at least 1 piece).
3. 3. Taking orthodontic history and examination from the patient and taking measurements and waxed closures for preparing a model (at least 1).
4. 4. Making a mobile plate in a sample model (at least 1 piece).
5. 5. Observation in the clinic.

Teaching Activities
(The time spent for the activities mentioned here will determine the credit. It needs to be filled carefully.)

Theoretical course hours per week : **2 hours / 28 week**
Weekly practical lessons : **20 hours / 5 week**
Midterm and midterm exam preparation **: 1 hours / 2 week**
Final exam and preparation for the final exam: **2 hours / 1 week**

Evaluation criteria

	Numbers	**Total Contribution (%)**
Midterm	2	36
Homework	2	6
Practice		
Projects		
Practical	1	6
Quiz	2	12

Semester final exam (%)	1	40	
Total	8	100	

workload of the lesson

Activities	Total Number of Weeks	Duration (Weekly Hours)	Total Workload at the End of the Term
Theoretical lesson per week	28	2	56
Practical lessons per week	5	20	100
Reading Activities			
Internet browsing, library study			
Material design, application			
Report preparing			
Preparing presentation			
Presentation			
Midterm and preparation for the midterm exam	2	1	2
Final exam and preparation for the final exam	1	2	2
Others			
Total workload			160
Total workload/ 25			6.4
Course Credit (AKTS)			6

Contribution Level Between Course Outcomes and Program Outcomes

	Program Outcomes	1	2	3	4	5
1	Knows the normal structures and functions of the human body and specifically the structures and teeth in the mouth area on the basis of cells, tissues, organs and systems and their interactions with each other.					X
2	Defines the causes and formation mechanisms of oral, dental and jaw diseases, the findings they cause, structural and functional disorders and how they affect the organism.					X
3	Knows, understands, correlates, and evaluates the symptoms and findings in the national core education program of dentistry and Gazi University Faculty of Dentistry Extended Education Program, diseases and conditions and professional practices at a determined level.					X
4	Knows to reach the best current scientific evidence in line with personal learning needs, and to evaluate its reliability and validity.					X
5	Knows the legislation on professional legal responsibilities, deontology and ethical principles..		X			
6	Knows and performs the professional practices in the national core education program of dentistry and Gazi University Faculty of Dentistry Extended Education Program.					X

	7	Conducts diagnosis, treatment and follow-up processes by prioritizing evidence-based practice, critical thinking and ethical principles.						X
	8	Aware of its limitations, puts personal learning goals to support professional development, guide the patient to the appropriate center when necessary.						X
	9	Knows the prevalence of diseases in the mouth, teeth and jaws in the society, contributes to prevention and reduction.						X
	10	While practicing his/her profession independently, he/she acts in accordance with the laws, regulations, legislation and ethical principles regarding his/her duties and responsibilities.					X	
	11	Has teamwork and leadership skills, and becomes a role model for colleagues and society.						X
	12	Plans personal professional development and realizes it with the principle of lifelong learning.				X		
	13	Establishes the effective written and oral communication with patients, their relatives, other healthcare professionals, society, relevant sectors and media.						X
	14	Follows the innovations in the profession by using foreign language and information communication technologies	X					
Instructors to Give the Course and Contact Information	Prof.Dr.Sevil Akkaya, sevilak@gazi.edu.tr, Prof.Dr. Sema Yüksel, semay@gazi.edu.tr, Prof.Dr. Neslihan Üçüncü, ucuncu@gazi.edu.tr, Prof.Dr. Emel Yücel, emelyucel0@gmail.com Prof.Dr.Tuba Tortop, tubatortop@gazi.edu.tr, Prof.Dr.Nilüfer Darendeliler, darende@gazi.edu.tr, Prof.Dr. Lale Taner, laletaner@yahoo.com, Prof.Dr.Çağrı ULUSOY, culusoy77@yahoo.com, Prof.Dr. Cumhur TUNCER, tuncer@gazi.edu.tr, Prof.Dr. Burcu BALOŞ TUNCER, burcu@gazi.edu.tr, Prof.Dr.Selin KALE VARLIK, kaleselin@yahoo.com, Prof.Dr. Belma IŞIK, belma@gazi.edu.tr, Prof.Dr.Çağrı TÜRKÖZ, cturkoz@hotmail.com, Prof.Dr. Deniz UZUNER, fduzuner@yahoo.com.tr Doç. Dr. Nehir Canıgür Bavbek, ncanigur@yahoo.com Doç.Dr. Erdal BOZKAYA, erdalbozkaya@gmail.com Dr. Öğr. Üyesi Gamze METİN GÜRSOY, gamgursoy@gmail.com							